San Joaquin Delta College Catalog 99-00

Section III - Description of Courses -

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Description of Courses

Transfer Credit—In accordance with Executive Order No. 167 issued by the Chancellor of the California State Universities on January 26, 1973, those courses numbered 1-69 and recommended by the faculty of Delta College and designated as baccalaureate in nature shall be accepted by any campus of the California State University for Credit toward its baccalaureate degrees. Transfer Credit to the University of California or to California State University is indicated by "UC, CSU" at the end of the catalogue description.

Associate Degree Credit Courses—All courses numbered 1 through 69 and some courses numbered 70 through 99 count toward the Associate Degree.

Non-Degree Credit Courses—Some courses numbered 70 through 99 are credit courses but do not count toward the associate degree or baccalaureate degree. These courses are indicated by the following statement at the end of catalogue description: "Units earned in this course do not count toward the associate degree."

Televised Courses—Courses numbered 49A, B, C or D in most divisions. These may represent 2 or 3 unit courses offered over televised public programs. New courses are added each year under the supervision of the college curriculum committee and cover a wide variety of topics.

Administration of Justice

A J 21 Criminal Justice in Society Units 3
Prerequisites: Reading level II.
Limitations on Enrollment: None.
Advisories: None.
This course is a review of the history and philosophy of administration of justice in America. Students identify the various subsystems, role expectations, and their interrelationships; theories of crime, punishment, and rehabilitation; and ethics, education, and training for professionalism in the system. (UC, CSU, CAN AJ 2)

A J 22 Concepts of Criminal Law Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is a review of the historical development and 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. (UC, CSU, CAN AJ 4)

A J 23 Principles and Procedures of The Justice System Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to the in-depth study of the role and responsibilities of each segment within the administration of justice system: law enforcement, judicial, and corrections. A past, present, and future exposure to each subsystem's procedures from initial entry to final disposition, and the relationship each segment maintains with its system members is covered. (CSU)

A J 24 Legal Aspects of Evidence Units 3
Prerequisites: Reading level II.
Limitations on Enrollment: None.

Advisories: None.
This course is an introduction to the origin, development, philosophy, and constitutional basis of evidence; constitutional procedural considerations affecting arrest, search, and seizure; kinds and degrees of evidence and rules governing admissibility, judicial decisions interpreting individual rights, and case studies. (CSU, CAN AJ 6)

A J 25 Criminal Investigation Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to the fundamentals of investigation which include crime scene search, the recording, collection and preservation of physical evidence, scientific aids, modus operandi, and sources of information, interviews and interrogation, follow up, and case preparation. (CSU, CAN AJ 8)

A J 26 Patrol Procedures Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to teach responsibilities, techniques, and methods of police patrol. Identification of police hazards, beat patrol, and observation techniques of responding to crime and emergency are covered. (CSU)

A J 28 Juvenile Law and Procedures Units 3
Prerequisites: Reading level II.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to show the organization, function and jurisdiction of juvenile agencies; the processing and detention of juveniles; juvenile case disposition; juvenile statutes and court procedures. (CSU)

A J 30A Critical Issues in The Justice System Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is one of two courses focusing on critical issues in the criminal justice system. It is designed to bring professional practitioners and qualified experts into the classroom to interact with students. The intent of the course is to provide an arena for students to develop critical thinking skills and problem solving skills toward critical issues in the justice system. Topics include community policing, the county courts, decriminalization of drugs, plea bargaining, and gangs. (CSU)

A J 31 Report Preparation Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to the preparation and utilization of police reports by patrol officers, investigators, courts, and the community. Emphasis is on techniques designed to improve the writing skills of students who have minimal training in factual report writing. (CSU)

A J 39 Crime Prevention Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is an in-depth exploration of all aspects of crime prevention. The approach is from an overall systems point of view to that of individual citizens wishing to avoid becoming a crime statistic. Special emphasis is placed on pragmatic crime prevention programs and individualized crime prevention projects for students. (CSU)

A J 40 Community Relations Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to treat current aspects and problems of police community relations. Among the topics covered are police image, role conflict, communication techniques, managing abnormal behavior in the field, crisis areas, and political fringe groups. (UC, CSU)

A J 41 Narcotics Investigation and Control Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to the identification of narcotics and dangerous drugs, control and investigation problems, laws and methods relating to the suppression, and prosecution of narcotics and dangerous drug violations. (CSU)

A J 50H Special Studies: Administration of Justice Units 1-2
Prerequisites: Reading level II; completion of AJ 21 and one additional core course with grade of "B" or better and presentation of a project acceptable to the instructor and division chairperson.
Limitations on Enrollment: None.
Advisories: None.
This course is open to any student who wishes to do advanced work in the field of administration of justice. The course may include research, directed reading, field work, class work, or advanced study, and the course may be repeated for a maximum of four units. (CSU)

A J 51 Introduction to Correctional Science Units 3
Prerequisites: Reading level II.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to provide the student with an overview of the history and trends of adult and juvenile corrections, including probation and parole. It focuses on the legal issues, specific laws, and general operation of correctional institutions. The relationship between corrections and other components of the judicial system is examined. (CSU)

A J 53 Correctional Interviewing and Interventions Units 3
Prerequisites: None.

Limitations on Enrollment: None.
Advisories: None.
This course is an overview of the techniques in interviewing and interventions available to practitioners in corrections. The student demonstrates the use of appropriate techniques and theories in confidence-building which may be used by the correctional employee in client interviews. This is a basic course for students who are planning to enter or who are already employed within the correctional science field. (CSU)

A J 54 Introduction to Probation and Parole Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to the structure and functions of probation as a judicial process and parole as an executive function; and, a comparison of the correctional process primarily concerned with the evaluation, treatment, and control of offenders. (CSU)

A J 55 Control and Supervision in Corrections Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is an overview of supervision and control of inmates in the local, state, and federal correctional institutions. The issues of supervision and control in a continuum from institutional daily living through crisis situations is introduced and discussed. The course emphasizes the role played by the offender and the correctional worker. Topics include inmate subculture, violence, and effects of crowding on inmates and staff, coping techniques for correctional officers in a hostile prison environment. The causes and effects of abusive tactics are discussed. (CSU)

A J 57 Legal Aspects of Corrections Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to provide students with an awareness of the historical framework, concepts, and precedents that guide correctional practice. Course material broadens the individual's perspective of the corrections environment, the civil rights of prisoners, and the responsibilities and the liabilities of corrections officials. (CSU)

A J 69V Internship: Administration of Justice Units 1-8
Prerequisites: None.
Limitations on Enrollment: The student must enroll in a course that is directly related to the administration of justice internship. The student must enroll in a minimum of 7 units during the semester including internship units. For summer session, the student must enroll in one related course in addition to internship. The combined total number of units a student may take in internship, work experience, and occupational practice may not exceed a maximum of 16 units. Participation requires submission and approval of internship program objectives and an employer internship agreement.
Advisories: GUID 30, 31, 32, 33.
This course is designed for students participating in an occupational internship in administration of justice. Application of discipline-related skills and knowledge of Secretaries Commission on Achieving Necessary Skills (SCANS) competencies is emphasized. Each student is engaged in a specific research project or on-the-job learning activities under the supervision of a worksite supervisor and a college internship instructor. (CSU)

A J 73 Basic Academy: Corrections Units 12
Prerequisites: None.
Limitations on Enrollment: Must submit to a criminal history records check; no felony convictions (Penal Code Section 12021).
Advisories: None.
This course is designed to provide students with the background and training needed to perform the duties required of correctional officers in the California Department of Corrections (CDC). Topics include criminal law, the use of force, inmate supervision, defensive tactics, inmate rights, and the care and uses of firearms.

A J 84 California Youth Authority Training Academy Units 12
Prerequisites: None; exempt from assessment testing.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to train students for the basic entry level positions of Group Supervisor, Youth Counselor and Medical Technical Assistants in the California Youth Authority (CYA) state institutions. This course may be presented at various Youth Authority facilities in varying locations.

A J 85A Reserve Officer Beginning: Level III Module A Units 3
Prerequisites: Student must file a felony disclaimer prior to, or at the first class meeting; exempt from assessment testing.
Limitations on Enrollment: None.
Advisories: None.
This course is an examination of the many areas of criminal justice as they relate to police operations such as professional orientation, community relations, law, laws of evidence, communications, arrest and control, investigation, and firearms. This course satisfies Penal Code 832 requirements and the Commission on Peace Officer Standards and Training (POST) academic training requirements for Level III Reserve Peace Officers.

A J 85B Reserve Officer Intermediate: Level II Module B Units 6
Prerequisites: A J 85A, Reserve Officer Beginning.
Limitations on Enrollment: None.

Advisories: None.
This course is an examination of the many areas of criminal justice as they relate to police operations, e.g., professional orientation, law, communications, driver awareness, force and weaponry, patrol procedures, traffic, custody, physical fitness, and defensive techniques. AJ 85A and AJ 85B satisfies the Commission on Peace Officer Standards and Training (POST) academic training requirements for the Level II Reserve Peace Officer.

A J 85C Reserve Officer Advanced: Level I Module C **Units 4**

Prerequisites: AJ 85A and AJ 85B.
Limitations on Enrollment: None.
Advisories: None.
This course is an examination of the many areas of criminal justice as they relate to police operations, police community relations, law, patrol procedures, laws of evidence, traffic, and criminal investigation. AJ 85A, AJ 85B, and AJ 85C satisfy the Commission on Peace Officer Standards and Training (POST) academic training requirements for the Level I Reserve Peace Officer.

A J 89 Department of Corrections Penal Code-832 **Units 4**

Prerequisites: None; exempt from assessment testing.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to train individuals for the basic entry level position of Correction Counselor I within the California Department of Corrections (CDC). This course may be presented at various correctional locations and/or facilities.

A J 90 Selected Topics: Administration of Justice **Units 1-2**

Prerequisites: None; exempt from assessment testing.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to enable the college to offer instruction in the discipline of administration of justice not already covered by the existing curriculum. Areas of instruction include new legislative mandates and agency specific requirements. Units earned in this course do not count toward the associate degree.

A J 91 Private Security Academy **Units 5**

Prerequisites: None.
Limitations on Enrollment: Must submit to a criminal records check, no felony convictions (Calif. Penal Code 12021), or legal mandates that restrict or prohibit employment as a law enforcement officer.
Advisories: None.
This course is designed to provide students with skills necessary to ensure satisfactory completion of the requirements of the California Department of Consumer Affairs for Security Officers. This course also prepares students for future participation in any California Police Basic Academy.

A J 92V Work Experience: Correctional Science **Units 1-8**

Prerequisites: None.
Limitations on Enrollment: The student must enroll in a course that is directly related to the administration of justice work experience. The student must enroll in a minimum of 7 units during the semester including work experience units. For summer session, the student must enroll in one related course in addition to work experience. The combined total number of units a student may take in internship, work experience, and occupational practice may not exceed a maximum of 16 units. Participation requires submission and approval of work experience program objectives and an employer work experience agreement.
Advisories: GUID 30, 31, 32, 33.
This course is designed for students employed in administration of justice. The course objectives are developed by the students in consultation with their supervisor. Students are engaged in a specific research project or on-the-job learning activities under the supervision of a worksite supervisor and a college work experience instructor. To register, complete an application form available at the Applied Science and Technology Division office, Holt 140.

A J 93 Basic Peace Officer Academy **units 20**

Prerequisites: None.
Limitations on Enrollment: No felony convictions or legal mandates that restrict or prohibit employment as a law enforcement officer. Must meet State minimum requirements for peace officers; passage of academy testing and examination process which includes entry-level written examination, submission of medical examination, fingerprints, and a felony disclaimer.
Advisories: None.
This course is designed for basic entry level training for students preparing for positions as Level I Reserve Officers, Police Officers, and Deputy Sheriffs assigned to patrol. This course is certified by the State of California Commission on Peace Officer Standards and Training (POST). Upon successful completion, students receive a San Joaquin Delta College Certificate of Completion and are certified by the State of California Department of Justice.

A J 95V Work Experience: Administration of Justice **Units 4**

Prerequisites: Students must be enrolled in at least three units of class work of which at least one course and also employment must be related to major field of study.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to give the students college credits for on-the-job experience related to the major study field. Students must demonstrate new and expanded learning experiences before being permitted to repeat. To register, contact the Work Experience staff in Shima 204. May be repeated three times.

A J 98 Department of Forestry Basic Peace Officer Academy **Units 12**

Prerequisites: Passage of an entry-level written examination approved by the Commission on Peace Officer Standards and Training; finger-

prints must be submitted to and cleared by the Department of Justice; a medical release must be obtained from a licensed physician, or sponsoring agency, for participation in the physical conditioning training, defensive tactics, physical testing and other physical skills training.
Limitations on Enrollment: None.
Advisories: None.
This course is designed for training individuals for positions as Level 1 reserve officers, police officers, deputy, sheriffs and other basic level peace officer positions. This course is certified by the Commission on Peace Officer Standards and Training (POST). The 560-hour academy program is presented in an intensive format through the Department of Forestry.

Agriculture Business

AGBUS 10 Management Records **Units 3**
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed for the study of farm accounting and types of farm records, record keeping, and reasons for their use. Students determine how to use measures of earnings to improve farm efficiency. Students learn the necessary steps of inputting the records utilizing commercial programs. (CSU)

AGBUS 12 Agricultural Economics **Units 3**
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to introduce students to our economic system, agricultural resources, factors effecting production, and basic economic concepts and terminology. The pricing and marketing of agriculture products, cost of production, agricultural loans, and government programs effecting agricultural are covered. (UC, CSU)

AGBUS 13 Agriculture and Natural Resource Mathematics **Units 3**
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to fundamental arithmetic and algebraic operations including fractions, decimals, equations, percentages, ratios, proportions, and linear, area, and volume measurements. Computations involving plant populations, farm machine outputs, construction costs, feed ingredients, and farm finance are stressed. (CSU)

AGBUS 15 Computers in Agriculture **Units 3**
Prerequisites: None.
Limitation on Enrollment: None.
Advisories: None.
This course is an introduction to the appropriate use of computers for agriculture business. The course is designed for the beginning computer user and it starts with the basics. Topics include word processing, spreadsheets, data base, and commercial farming programs. (CSU, CAN AG 2)

AGBUS 46 Agricultural Marketing **Units 3**
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed for the study of agriculture marketing problems, policies, trends, marketing functions, and channels through state and federal regulatory agencies. Detailed studies of the marketing of selected agricultural commodities are made. (CSU)

AGBUS 50H Special Studies: Agriculture Business **Units 1-2**
Prerequisites: Completion of survey course with a grade of "B" or better and presentation of a project acceptable to the instructor and division chairperson.
Limitations on Enrollment: None.
Advisories: None.
This course is open to students qualified to do advanced work in the field. The course may include research, directed reading, field work, or other advanced study and the course may be repeated for a maximum of four units. (CSU)

AGBUS 69V Internship: Agricultural Business **Units 1-8**
Prerequisites: None.
Limitations on Enrollment: The student must enroll in a course that is directly related to the agricultural business internship. The student must enroll in a minimum of 7 units during the semester including internship units. For summer session, the student must enroll in one related course in addition to internship. The combined total number of units a student may take in internship, work experience, and occupational practice may not exceed a maximum of 16 units. Participation requires submission and approval of internship program objectives and an employer internship agreement.
Advisories: GUID 30, 31, 32, 33.
This course is designed for students participating in an occupational internship in agricultural business. Application of discipline-related skills and knowledge of Secretaries Commission on Achieving Necessary Skills (SCANS) competencies is emphasized. Each student is engaged in a specific research project or on-the-job learning activities under the supervision of a worksite supervisor and a college internship instructor. (CSU)

AGBUS 75 Selected Topics: Agriculture **Units 1-2**
Prerequisites: None; exempt from assessment testing.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to offer instruction in one of the specialized

areas of agriculture not already covered by the existing curricula.

AGBUS 96V Work Experience: Agricultural Business Units 1-8

Prerequisites: None.
Limitations on Enrollment: The student must enroll in a course that is directly related to the agricultural business work experience. The student must enroll in a minimum of 7 units during the semester including work experience units. For summer session, the student must enroll in one related course in addition to work experience. The combined total number of units a student may take in internship, work experience, and occupational practice may not exceed a maximum of 16 units. Participation requires submission and approval of work experience program objectives and an employer work experience agreement.
Advisories: GUID 30, 31, 32, 33.
This course is designed for students employed in agricultural business. The course objectives are developed by the students in consultation with their supervisor. Students are engaged in a specific research project or on-the-job learning activities under the supervision of a worksite supervisor and a college work experience instructor. To register, complete an application form available at the Applied Science and Technology Division office, Holt 140.

Agriculture Engineering

AGEGR 21 Agricultural Welding Units 2

Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to cover the techniques of operating electric arc welders and oxyacetylene torches for fusion welding, heating, brazing, and cutting. Hard surfacing metals used in construction and repair of agriculture equipment are also covered. Metal Inert Gas (MIG) and Tungsten Inert Gas (TIG) welding are emphasized. (CSU)

AGEGR 30A Introduction to Compact Engines Units 5

Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to introduce students to the basic theory, maintenance, construction, and repair of two-stroke and four-stroke commercial, recreational, marine, motorcycle, and lawn and garden engines and their applications. (CSU)

AGEGR 30B Beginning Compact Engines Units 5

Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to prepare students to analyze, trouble-shoot, repair, and overhaul both two-stroke and four-stroke engines and the equipment powered by the engines. (CSU)

AGEGR 30C Intermediate Compact Engines Units 5

Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to instruct student to analyze electrical problems found in compact engine equipment and to service and repair the powertrain. (CSU)

AGEGR 30D Advanced Compact Engines Units 5

Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to instruct students in specialized applications, drive trains, clutches, transmissions, electrical systems, and compact diesel systems. Students write work orders, develop parts lists, and work with customers. (CSU)

AGEGR 33 Equipment Maintenance and Operation Units 2

Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to the safe operation and use of the following equipment: wheel tractors, crawlers, skid steer loaders, front-end loaders, backhoes, and forklifts. Preventative maintenance, adjustments, minor repairs, and servicing of the above are emphasized. (CSU)

AGEGR 50H Special Studies: Agriculture Engineering Units 1-2

Prerequisites: Completion of survey course with grade of "B" or better and presentation of a project acceptable to the instructor and division chairperson.
Limitations on Enrollment: None.
Advisories: None.
This course is open to students qualified for advanced work in the field. The course may include research, directed reading, field work, or other advanced study and the course may be repeated for a maximum of four units. (CSU)

AGEGR 64 Basic Engines Units 3

Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to the theory of 2-stroke and 4-stroke engines, oils, lubrication, safety inspections, and related mathematics and measurement. (CSU)

AGEGR 69V Internship: Agricultural Engineering Units 1-8

Prerequisites: None.
Limitations on Enrollment: The student must enroll in a course that is directly related to the agricultural engineering internship. The student must enroll in a minimum of 7 units during the semester including internship units. For summer session, the student must enroll

in one related course in addition to internship. The combined total number of units a student may take in internship, work experience, and occupational practice may not exceed a maximum of 16 units. Participation requires submission and approval of internship program objectives and an employer internship agreement.
Advisories: GUID 30, 31, 32, 33.
This course is designed for students participating in an occupational internship in agricultural engineering. Application of discipline-related skills and knowledge of Secretaries Commission on Achieving Necessary Skills (SCANS) competencies is emphasized. Each student is engaged in a specific research project or on-the-job learning activities under the supervision of a worksite supervisor and a college internship instructor. (CSU)

AGEGR 75 Selected Topics: Agricultural Engineering **Units 1-2**
Prerequisites: None; exempt from assessment testing.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to offer instruction in one of the specialized areas of agricultural engineering not already covered by the existing curricula.

AGEGR 87A Compact Engines Specialization Units 3
Prerequisites: AGEGR 30D.
Limitation on Enrollment: This course requires instructor approval to enroll.
Advisories: None.
This course is designed for advanced students in compact engines. Students complete an advanced specialized project developed in consultation with the instructor.

AGEGR 96V Work Experience: Agriculture Engineering **Units 1-8**
Prerequisites: None.
Limitation on Enrollment: The student must enroll in a course that is directly related to the agricultural engineering work experience. The student must enroll in a minimum of 7 units during the semester including work experience units. For summer session, the students must enroll in one related course in addition to work experience. The combined total number of units a student may take in internship, work experience, and occupational practice may not exceed a maximum of 16 units. Participation requires submission and approval of work experience program objectives and an employer work experience agreement.
Advisories: GUID 30, 31, 32, 33.
This course is designed for students employed in agricultural engineering. The course objectives are developed by the students in consultation with their supervisor. Students are engaged in a specific research project or on-the-job learning activities under the supervision of a worksite supervisor and a college work experience instructor. To register, complete an application form available at the Applied Science and Technology Division office, Holt 140.

Anatomy

ANAT 1 Human Anatomy **Units 4**
Prerequisites: Reading level II.
Limitations on Enrollment: None.
Advisories: None.
This course is a study of the structural relationships of the parts of the human body and also includes some work with cadavers. It is of interest to biological science, pre-medical, pre-dental, and health education majors, and for laboratory technicians. The laboratory includes work with the use of cadavers, preserved animals, and numerous anatomical models. (UC, CSU, CAN BIOL 10. CAN BIOL SEQ B with both ANAT 1 and PHYSI 1)

ANAT 2 Anatomy and Physiology **Units 6**
Prerequisites: Reading level II; CHEM 3A with a grade of "C" or better; CHEM 3B strongly recommended.
Limitations on Enrollment: None.
Advisories: None.
This course is a study of the anatomical and physiological relationship of the parts of the human body. Anatomy & Physiology is of interest to students enrolled in, or planning to enroll in, the ADN (Associate Degree Nursing) and the LVN (Licensed Vocational Nurse) programs. (UC, CSU)

Animal Husbandry Sciences

AH SC 10 Principles of Animal Science **Units 3**
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to provide an overview of the principles of animal science and the interrelationships of domestic animals and mankind. The course investigates various disciplines including anatomy and physiology, reproduction, nutrition, animal health, animal products, animal behavior, and genetics. (UC, CSU, CAN AG 6)

AH SC 10L Principles of Animal Science Laboratory **Units 1**
Prerequisites: AH SC 10, or concurrent enrollment in AH SC 10.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to provide an introduction to the empirical methods including data collection and analysis as well as an investigation of the basic management concepts associated with animal science. (CSU)

AH SC 11A Introduction to Livestock Evaluation **Units 2**
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to introduce students to the basic factors involved in evaluation and selection of breeding, feeder and market animals, and the application of these factors in the livestock industry. The visual appraisal of live animals and carcasses combined with production records are used to determine the practical usefulness and productivity of livestock. (UC, CSU)

AH SC 11B Beginning Livestock Evaluation **Units 2**
Prerequisites: AH SC 11A with a grade of "C" or better.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to introduce students to the basic factors involved in evaluation and selection of breeding, feeder and market animals, and the application of these factors in the livestock industry. The visual appraisal of live animals and carcasses combined with production records are used to determine the practical usefulness and productivity of livestock. (UC, CSU)

AH SC 11C Intermediate Livestock Evaluation Units 2
Prerequisites: AH SC 11B with a grade of "C" or better.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to introduce the students to the basic factors involved in evaluation and selection of breeding, feeder and market animals and the application of these factors in the livestock industry. The visual appraisal of live animals and carcasses, combined with production records, will be used to determine the practical usefulness and productivity of livestock. (UC, CSU)

AH SC 11D Advanced Livestock Evaluation Units 2
Prerequisites: AH SC 11C with a grade of "C" or better.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to introduce students to the basic factors involved in evaluation and selection of breeding, feeder and market animals, and the application of these factors in the livestock industry. The visual appraisal of live animals and carcasses combined with production records are used to determine the practical usefulness and productivity of livestock. (UC, CSU)

AH SC 21 Livestock Production Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course introduces students to the beef, sheep, and swine industry in California and in the United States. The breed, market classes, grades, and selection of marketing and breeding animals are stressed. The feeding, care, management, and marketing of the different segments of the industry are discussed. (CSU)

AH SC 25A Introduction to Livestock Presentation Units 2
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to prepare students to apply animal husbandry practices and procedures that are involved with domestic farm animals. The use of equipment and facilities, handling of animals, and preparation of a budget and calendar of operations are discussed. The planning and purchase of feeder animals are covered. (CSU)

AH SC 25B Beginning Livestock Presentation Units 2
Prerequisites: AH SC 25A with a grade of "C" or better.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to prepare students to apply animal husbandry practices and procedures that are involved with domestic farm animals. The use of equipment and facilities, handling of animals, and preparation of a budget and calendar of operation are discussed. The planning and purchase of feeder animals are covered. (CSU)

AH SC 25C Intermediate Livestock Presentation Units 2
Prerequisites: AH SC 25B with a grade of "C" or better.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to prepare students to apply animal husbandry practices and procedures that are involved with domestic farm animals. The use of equipment and facilities, handling of animals, and preparation of a budget and calendar of operation are discussed. The planning and purchase of feeder animals are covered. (CSU)

AH SC 25D Advanced Livestock Presentation Units 2
Prerequisites: AH SC 25C with a grade of "C" or better.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to prepare students to apply animal husbandry practices and procedures that are involved with domestic farm animals. The use of equipment and facilities, handling of animals, and preparation of a budget and calendar of operation are discussed. The planning and purchase of feeder animals are covered. (CSU)

AH SC 34 Animal Health and Sanitation Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is an emphasis on elementary anatomy and physiology of livestock which includes preventive measures for common diseases and parasites, immunization, sanitation, and management. Common diseases and parasites regarding symptoms, causes, prevention, and physical treatment are also emphasized. (CSU)

AH SC 36 Livestock Breeding Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to introduce students to the anatomy and physiology of farm animal reproduction and to the basic principles of genetics and their application to livestock production. Gestation, parturition, lactation, artificial insemination, embryo transfer, inheritance, breeding systems, production testing, and breeding selection are covered. (CSU)

AH SC 50H Special Studies: Animal Husbandry Sciences Units 1-2
Prerequisites: Completion of survey course with grade of "B" or better and presentation of a project acceptable to the instructor and division chairperson.
Limitations on Enrollment: None.
Advisories: None.
This course is open to students qualified to do advanced work in the field. The course may include research, directed reading, field work, or other advanced study, and the course may be repeated for a maximum of 4 units. (CSU)

AH SC 69V Internship: Animal Science Units 1-8
Prerequisites: None.
Limitations on Enrollment: The student must enroll in a course that is directly related to the animal science internship. The student must enroll in a minimum of 7 units during the semester including internship units. For summer session, the student must enroll in one related course in addition to internship. The combined total number of units a student may take in internship, work experience, and occupational practice may not exceed a maximum of 16 units. Participation requires submission and approval of internship program objectives and an employer internship agreement.

Advisories: GUID 30, 31, 32, 33.
This course is designed for students participating in an occupational internship in animal science. Application of discipline-related skills and knowledge of Secretaries Commission on Achieving Necessary Skills (SCANS) competencies is emphasized. Each student is engaged in a specific research project or on-the-job learning activities under the supervision of a worksite supervisor and a college internship instructor. (CSU)

AH SC 75 Selected Topics: Animal Husbandry Science Units 1-2
Prerequisites: None; exempt from assessment testing.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to offer instruction in one of the specialized areas of animal husbandry not already covered by existing curriculum.

AH SC 96V Work Experience: Animal Husbandry Science Units 1-8
Prerequisites: None.
Limitation on Enrollment: The student must enroll in a course that is directly related to the agricultural engineering work experience. The student must enroll in a minimum of 7 units during the semester including work experience units. For summer session, the student must enroll in one related course in addition to work experience. The combined total number of units a student may take in internship, work experience, and occupational practice may not exceed a maximum of 16 units. Participation requires submission and approval of work experience program objectives and an employer work experience agreement.
Advisories: GUID 30, 31, 32, 33.
This course is designed for students employed in the area of animal science. The course objectives are developed by the students in consultation with their supervisor. Students are engaged in a specific research project or on-the-job learning activities under the supervision of a worksite supervisor and a college work experience instructor. To register, complete an application form available at the Applied Science and Technology Division office, Holt 140.

Anthropology

ANTHR 1 Cultural Anthropology Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is a survey of various contemporary cultures which seeks to promote an awareness of cross-cultural uniformity and diversity. The basic concepts in cultural anthropology such as kinship, economic, political systems, and symbolic organization including religion, ritual, and folklore are discussed along with issues of social inequality and culture change. (UC, CSU, CAN ANTH 4)

ANTHR 2 Physical Anthropology Units 3
Prerequisites: Reading level II.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to physical evolution of humans from the earliest hominid forms to modern groups. Drawing from biological, geological, and anthropological data, the course examines the various forces acting on evolutionary primate development. The course also examines human physical variations in contemporary populations and discusses the problem of racial classification. (UC, CSU, CAN ANTH 2)

ANTHR 2L Physical Anthropology Laboratory Units 1
Prerequisites: Completion of or concurrent enrollment in ANTHR 2.
Limitations on Enrollment: None.
Advisories: None.
This course is designed as a laboratory course which supplements ANTHR 2. This course is designed as a laboratory course which supplements Anthropology 2. Students become familiar with the process used in identifying and analyzing human skeletal remains, the physical evidence used in the study of primate evolution including fossilization, geologic time scale and archaeological reconstruction of prehistoric activities, comparative osteology of non-human primates, primate behavior, paleoanthropology, and the development of stone tool technologies. (UC, CSU)

ANTHR 4 Introduction to Linguistics Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to the study of language in theory and practice. Students explore what is known about human language, its uniqueness, its structure, its use, its diversity, and its universality. An effort is made to analyze the relationship between language, culture, and social levels. (UC, CSU)

ANTHR 6 Introduction to North American Indians Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is a comparative study of selected native American Indians and cultures from the Arctic to Panama, utilizing ethnographical and archaeological materials. (UC, CSU)

ANTHR 10 Introduction to Archaeology Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is a survey of the development of archaeology as an anthropological study, with particular emphasis on the contributions of archaeology to the understanding of the development of human culture. The objectives, methods, and techniques of modern archaeology are combined with a survey of major archaeological sites and cultures. (UC, CSU, CAN ANTH 6)

ANTHR 12A Beginning Field Archaeology Units 1
Prerequisites: Completion of, or concurrent enrollment in, ANTHR 10.
Limitations on Enrollment: None.

Advisories: None.
This course is a beginning applied archaeology course which offers students opportunity to do field and or laboratory research. The field work includes site survey and excavation. The laboratory work emphasizes treatment, classification, and initial analysis of artifacts and data recovered through excavations. (UC, CSU)

ANTHR 12B Intermediate Field Archaeology Units 1
Prerequisites: Completion of, or concurrent enrollment in ANTHR 10.
Limitations on Enrollment: None.
Advisories: None.
This course is an intermediate applied archaeology course which offers students opportunity to do field and/or laboratory research. The field work includes site survey and excavation. The laboratory work emphasizes treatment, classification, and analysis of artifacts and data recovered through field excavations. (UC, CSU)

ANTHR 15 Selected Topics: Anthropology Units 1-2
Prerequisites: Reading level II.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to offer instruction in one of the specialized areas of anthropology not already covered by the existing curricula. (UC, CSU)

ANTHR 50H Special Studies: Anthropology Units 1-2
Prerequisites: Presentation of a project acceptable to the instructor and the division chairperson; ANTHR 1, 2, or 10 with a grade of "B" or better.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to allow qualified students qualified to do advanced work in the field. The course includes research, directed reading, field work, or other advanced study. The course may be repeated for a maximum of 4 units. (UC, CSU)

Apprenticeship

Automotive Technology

A-AUT 50 Automatic Transmissions and Transaxles Units 5
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to prepare the student to analyze, adjust, service, and repair automatic transmissions and transaxles on foreign and domestic automobiles. (CSU)

A-AUT 51 Manual Drivetrain and Axles Units 5
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to prepare the student to analyze, service, and repair: differentials, standard transmissions and transaxles, front-wheel drive axles, drivelines, four-wheel drive systems, and clutch systems. (CSU)

A-AUT 52 Engine Rebuilding Units 5
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to prepare the student to analyze, adjust, service, and repair gasoline-powered automobile engines. The course includes precision machining operations and the complete rebuilding of an engine. (CSU)

A-AUT 53 Brakes, Suspension, and Steering Units 5
Prerequisites: None.
Limitations on Enrollment:
Advisories: None.
This course is designed to prepare the student to analyze, adjust, service, and repair: automotive brakes, suspension, and steering systems. (CSU)

A-AUT 54 Starting, Charging, and Electrical Systems Units 5
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to prepare the student to effectively diagnose and repair automotive starting, charging, and electrical systems. (CSU)

A-AUT 55 Ignition Systems and Electronic Engine Controls Units 5
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to prepare the student to diagnose and repair automotive engine performance problems and driveability malfunction-related failures. The student completing the requirements of A-AUT 55 Ignition Systems and Electronic Engine Controls and A-AUT 56 Fuel Management and Computer Controls is eligible to test to receive certification for the approved Clean Air Car Course from the State of California Bureau of Automotive Repair. (CSU)

A-AUT 56 Fuel Management and Computer Controls Units 5
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to prepare the student to troubleshoot and diagnose automotive fuel-injection systems, engine computer systems, emission systems, and some carburetion systems. The student completing the requirements of A-AUT 55 Ignition Systems and Electronic Engine Controls and A-AUT 56 Fuel Management and Computer Controls is eligible to test to recieve certification for the approved Clean Air Car Course from the State of California Bureau of Automotive Repair. (CSU)

A-AUT 57 Air Conditioning, Heating, and Electrical Systems Units 5
Prerequisites: None.

Limitations on Enrollment: None.
Advisories: None.
The course is designed to prepare the student to diagnose and repair automotive air conditioning, heating, and specialized electrical accessories systems. (CSU)

A-AUT 71A Manual Drive Train and Axles Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed for the indentured apprentice or technician working in the trade. This course is designed to give students the technical information in automotive front wheel drives, differentials, standard transmissions and transaxles, clutches, drivelines, and 4-wheel drives to enter the job market. Complete repair procedures are provided in all areas. Students with two years of high school auto or two years auto-related experience will be allowed to enroll.

A-AUT 71B Brakes, Suspension, and Steering Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed for the indentured apprentice or technician working in the trade. This course is designed to give technical information in automotive wheel alignment, suspension overhaul, steering mechanisms, and brake overhaul. Complete repair is provided in all areas. Students with two years of high school auto or two years auto-related experience will be allowed to enroll.

A-AUT 72A Starting, Charging, and Electrical Systems Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed for the indentured apprentice or technician working in the trade. This course is designed to give theory and practical repair procedures in starting systems, charging systems, batteries, and electrical circuits in domestic and foreign automobiles. Students with two years of high school auto or two years auto-related experience will be allowed to enroll.

A-AUT 73A Engine Performance and Ignition Systems Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed for the indentured apprentice or technician working in the trade. This course is designed to give students training in ignition systems, engine performance, and driveability problems including computer controlled engines. Domestic and foreign systems are covered using mock-ups. Students with two years of high school or two years auto-related experience will be allowed to enroll.

A-AUT 73B Engine Performance and Fuel Systems Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed for the indentured apprentice or technician working in the trade. This course is designed to give technical training in theory in all types of fuel management systems and engine computer control. Students trouble-shoot and diagnose carburetion sytems, fuel injection systems, and engine computer systems. Domestic and foreign systems are covered. Students with two years auto-related experience will be allowed to enroll.

A-AUT 78A Auto Body Fundamentals Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to emphasize basic auto body safety standards. The course includes elementary sheetmetal repair, auto body welding, metal finishing, applying plastic fillers, grinding, and shrinking.

A-AUT 78B Basic Auto Body Repair and Painting Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to emphasize Metal Inert Gas (MIG) welding of light gauge metal, basic auto body tools, basic metal finishing, grinding, filling, removing auto body parts, and basic painting procedures.

A-AUT 79A Auto Body Frame Alignment Units 2
Prerequisites: None.
Limitation on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to emphasize frame and alignment equipment and procedures, grinding techniques, shrinking aluminum, replacing trim and upholstery, and painting procedures.

A-AUT 79B Auto Body Metal Working Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to emphasize Metal Inert Gas (MIG) welding of galvanized and aluminum materials, flux core welding, plasma arc cutting, replacing structural components, restoring corrosion protection, and replacing glass.

A-AUT 80A Frame Straightening Fundamentals Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to emphasize the utilization of frame straightening equipment, body alignment procedures, removal and installation of headliners, fiberglass body preparation and repair, and plastic parts repair.

A-AUT 80B Advanced Frame Straightening Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to emphasize frame measurement and body alignment, body panel removal and replacement, specialized plastic repairs, and painting.

A-AUT 81A Advanced Auto Body Repair Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to emphasize arc welding, Metal Inert Gas (MIG) welding, metal straightening, and repairing of: fiberglass body, unibody structural panel, frame, and suspension and steering system.

Construction Technology

A-CON 80A Mill Cabinet: Introduction Units 4
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to introduce the career opportunities and characteristics of the cabinetmaking industry. The course also includes cabinetmaker's mathematics, wood characteristics, grades of lumber, wood joinery, use of hand tools, and general shop safety.

A-CON 80B Mill Cabinet: Fundamentals Units 4
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to introduce the characteristics and use of power hand tools used in the cabinetmaking industry. The course also includes cabinet joint construction and basic blueprint reading.

A-CON 81A Mill Cabinet: Basic Woodworking Units 4
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to introduce the applied mathematics for cabinetmaking. The course also includes blueprint reading of shop drawings, and use and operation of power machines including band saws, routers, grinders, and table saws.

A-CON 81B Mill Cabinet: Layout and Benchwork Units 4
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to introduce cabinet layout, millwork standards, benchwork, and plastic laminates.

A-CON 82A Mill Cabinet: Materials and Application Units 4
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to introduce the applications and uses of lumber, veneers, adhesives, commercial plastic laminates, and specialized power equipment in the wood-working industry.

A-CON 82B Mill Cabinet: Commercial Cabinetry Units 4
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to introduce the characteristics and requirements for commercial cabinetry, store fixtures, millwork, and commercial blueprint reading. The course also includes the use of shapers, commercial sanders, and milling machines.

A-CON 83A Mill Cabinet: Design, Layout, and Production Units 4
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to introduce the residential and commercial cabinet design, production methods, production layout, and cabinet construction from start to finish.

A-CON 83B Mill Cabinet: Project Planning Units 4
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to introduce the requirements for job planning, project supervision, construction requirements, construction scheduling, construction costs, and the construction process for a commercial mill cabinet project.

A-CON 84A Construction Painting: Fundamentals Units 3
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to introduce the basic fundamentals of painting. The course includes tools, materials, and applications for residential, commercial, and industrial painting processes.

A-CON 84B Construction Painting: Color Mixing and Matching Units 3
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to introduce technical skills in color mixing and matching.

A-CON 85A Construction Painting: Wood Finishing Units 3
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to introduce the technical aspects of wood finishing. The course includes the techniques and procedures used in the painting and decorating industry.

A-CON 85B Construction Painting: Blueprint Reading Units 3
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to introduce reading of construction prints as used by painters and drywall finishers.

A-CON 86A Construction Painting: Spray Painting Units 3
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to introduce the techniques of spray painting for residential and commercial projects.

A-CON 86B Construction Painting: Ladders and Scaffolding Units 3
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to introduce the safe use of ladders, scaffolding, and rigging utilized in the painting, decorating, and drywall finishing industry. The course places emphasis on meeting Occupational Safety and Health Act (OSHA) and other industry standards.

A-CON 86C Wall Covering Units 3
Prerequisites: Indentured apprentice.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to introduce the theory and techniques of applying wall coverings to interiors of commercial and residential buildings. A study of tools, equipment, materials and supplies required to apply wall coverings according to industry standards will be presented.

A-CON 86D Abrasive and Water Blasting Units 3
Prerequisites: Indentured apprentice.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to introduce the theory and techniques of abrasive and water blasting. The use and operation of abrasive and water blasting equipment will be emphasized according to industry standards.

A-CON 93B Roofing 2 Units 3
No Course Description Available.

A-CON 94A Roofing 3 Units 3
No Course Description Available.

A-CON 94B Roofing 3 Units 3
No Course Description Available.

A-CON 95S Drywall Units 3
No Course Description available.

A-CON 95T Drywall Units 3
No Course Description available.

A-CON 96A Drywall Taping Units 3
No Course Description available.

Electrical Technology

A-ELE 70A Introduction to Electricity Units 4
Prerequisites: None.
Limitation on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to provide students with the knowledge of the fundamentals of electricity including safety, introduction to electricity, and careers in the electrical field.

A-ELE 70B Electrical Fundamentals Units 4
Prerequisites: None.
Limitation on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to provide students with the knowledge of the fundamentals of combination circuits, conductors, insulators, and electrical print reading.

A-ELE 71A Electrical Circuits and Code Units 4
Prerequisites: None.
Limitation on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to provide students with the knowledge of the fundamentals of the National Electrical Code requirements, alternating current principles, alternating circuits, wire characteristics, and conduit bending.

A-ELE 71B Electrical Circuits and Equipment Units 4
Prerequisites: None.
Limitation on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to provide students with the knowledge of the fundamentals of electrical test equipment, inductance, capacitance, transformers, and commercial construction drawings.

A-ELE 72A Electrical Motors Units 4
Prerequisites: None.
Limitation on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to provide students with the knowledge of the fundamentals of electrical grounding, resonance circuits, high and low voltage wiring systems and electrical motors.

A-ELE 72B Electrical Motor Control Systems Units 4
Prerequisites: None.
Limitation on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to provide students with the knowledge of the fundamentals of three-phase transformers, direct current motors, motor starters, control systems, air conditioning and refrigeration systems.

A-ELE 73A Electrical Motor Control Circuits Units 4
Prerequisites: None.
Limitation on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to provide students with advanced knowledge of electricity, motor controls, semiconductors, electronic devices, and refrigeration system installation.

A-ELE 73B Programmable Logic Controllers Units 4
Prerequisites: None.
Limitation on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to provide students with the knowledge of the fundamentals of electronic devices, digital logic circuits, process control, and programmable logic controllers.

A-ELE 74A Motor Control Systems Units 4
Prerequisites: None.
Limitation on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to provide students with a working knowledge of programmable logic controllers, their installation, operation and programming.

A-ELE 75A Basic Electricity Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to provide a background in basic electricity. The course includes theory and applications of electricity, Ohms Law, magnetism, power and circuits.

A-ELE 75B Advanced Electricity Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to provide a background in the theory and application of advanced electricity. Topics included are alternating current, inductance, capacitance, transformers, circuits, and vectors related to motor and generators.

A-ELE 75C Transformers and Polychlorinated Biphenyl Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to includes the theory and advanced application of transformers, power circuit breakers, electrical controls and print reading.

A-ELE 75D Protective Relaying Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is an introduction to the theories and skills involved in basic power system protective relay design and operation.

A-ELE 75E High Voltage Switching Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed for students to acquire the knowledge necessary to perform high voltage switching (12,000 volts and above). Emphasis will be placed on theory and hands-on application.

A-ELE 75F Electrical Motors and Controls Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to present the application of wiring methods and control circuit design for power plants. The course includes interpreting electrical schematics, wiring diagrams, and troubleshooting control circuits.

Industrial Technology

A-IND 72A Introduction to Apprenticeship Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is an introduction to the requirements of an apprenticeship program, State of California Division of Apprenticeship standards, role of the apprentice, general safety, general operating procedures, and documentation.

A-IND 72B Isolated Apprentices Units 2
Prerequisites: None. Limitations on Enrollment Indentured apprentice.
Advisories: None.
This course is intended for indentured apprentices and it is a course among a sequential number of course covering the discipline. The theory portion of the sequential courses include mathematics, safety, tools, machines, blueprint reading, material, and estimating as applied to electricity. The course may be pursued of a maximum number of units in accordance with the number of class hours per semester. Students may opt for a three hour or a six-hour lecture laboratory per week course. In addition to the one night per week class meeting, an additional 18 hours outside of class is required per semester.

A-IND 73B Isolated Apprentices Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is intended for indentured apprentices and it is a course among a sequential number of course covering the discipline. The theory portion of the sequential courses include mathematics, safety, tools, machines, blueprint reading, material, and estimating as applied to electricity. The course may be pursued of a maximum number of units in accordance with the number of class hours per semester. Students may opt for a three hour or a six-hour lecture laboratory per week course. In addition to the one night per week class meeting, an additional 18 hours outside of class is required per semester.

A-IND 74A Isolated Apprentices Units 6
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is intended for indentured apprentices and it is a course among a sequential number of course covering the discipline. The theory portion of the sequential courses include mathematics, safety, tools, machines, blueprint reading, material, and estimating as applied to electricity. The course may be pursued of a maximum number of units in accordance with the number of class hours per semester. Students may opt for a three hour or a six-hour lecture laboratory per week course. In addition to the one night per week class meeting, an additional 18 hours outside of class is required per semester.

A-IND 74B Isolated Apprentices Units 6
Prerequisites: None.

Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is intended for indentured apprentices and it is a course among a sequential number of course covering the discipline. The theory portion of the sequential courses include mathematics, safety, tools, machines, blueprint reading, material, and estimating as applied to electricity. The course may be pursued of a maximum number of units in accordance with the number of class hours per semester. Students may opt for a three hour or a six-hour lecture laboratory per week course. In addition to the one night per week class meeting, an additional 18 hours outside of class is required per semester.

A-IND 76 Applied Technical Mathematics Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to provide a review of the computational and problem-solving skills needed for success in a plant maintenance and operations career. The topics include basic mathematical functions, manipulation of algebraic expressions, ratio, proportions, geometric calculations, and right-angle trigonometry.

A-IND 77A Mechanical Fundamentals Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to introduce students to basic principles of physics including the laws of motion and fluid behavior.

A-IND 77B Bearings, Pumps, and Turbines Units 2
Prerequisites: Indentured apprentice.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to introduce the effects of friction, cavitation and vibration on bearings, pumps, and turbines. The course also identifies various types of pumps and their application.

A-IND 77C Motors and Generators Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to include the theory and advanced application of alternating current motors and three-phase generators. Topics of instruction include the principles of construction of large motors and generators rated up to 10,000 horsepower.

A-IND 77D Plant Auxiliary Equipment Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to include the study of auxiliary equipment used in hydro-electric plants. Emphasis is placed on the operation and application of valves, hydraulic controls, and pneumatic controls.

A-IND 77E Hydraulics Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed for students to apply schematic interpretation, troubleshooting, and problem solving techniques through the use of a hydraulics simulator.

A-IND 77F Pneumatics Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed for the student to apply schematic interpretation, troubleshooting, and problem solving techniques through the use of a pneumatic simulator. Emphasis is placed on pressure and flow requirements.

A-IND 77G Governor Systems Units 2
Prerequisites: Indentured apprentice.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to include the function, operation, maintenance, and troubleshooting of governors utilized in a generating plant.

A-IND 77H Computers in Hydro-Electric Plants Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to introduce the basic concepts of using a computer in hydro-electric power plants. The topics include (Microsoft) spreadsheets, word processing, reports, desktop accessories, and running commercial applications for plant operations and maintenance.

A-IND 77J Water Aqueduct Systems Units 2
Prerequisites: Indentured apprentice.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to provide the fundamentals of water measurement and water treatment for a statewide water system. Included are the procedures for monitoring water quality, water testing, water treatment, water management and water flow.

A-IND 77K Fundamentals of Thermodynamics Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to introduce the fundamentals of thermodynamics as it applies to air conditioning and refrigeration. The course includes the effects of heat on matter, methods of heat transfer, and properties of gases.

A-IND 77L Project Control and Power Contracts Units 2
Prerequisites: Indentured apprentice.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to provide a review of contracts related to the State Department of Water Resources; operation, power, and water contract specifications. Also included are be the study of documentation control, operation procedures and electronic communication systems.

A-IND 77M Air Conditioning Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to introduce the theory, application, and troubleshooting techniques for basic air conditioning systems.

A-IND 77N Electro-Mechanical Print Reading Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to introduce the theory and skills involved in reading and interpreting electrical drawings, schematics, and wiring diagrams.

A-IND 78A Defensive Driving Units 1
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce students to basic driving techniques in order to reduce the risk of being involved in a vehicular accident. The course includes the State of California vehicular code, defensive driving techniques, and State of California service vehicular operation and maintenance rules and regulations.

A-IND 78B Heavy Truck Operation Units 1
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce students to the types of heavy trucks used by the California State Department of Water Resources, their maintenance, and their safe operation.

A-IND 78C Diesel and Small Gasoline Engines Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce students to the basic types of small gasoline engines, diesel engines, and chain saws used by the California State Department of Water Resources.

A-IND 78D Surveying and Flood Control Systems Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce students to flood control systems, inspection, and major causes of levee and dam failure. The course also includes the fundamentals of surveying.

A-IND 78E Soils, Asphalt, and Concrete Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce students to the various types of soil, asphalt, and concrete used by the California State Department of Water Resources, including their origin, composition, general description, and procedures for application.

A-IND 78F Environmental Awareness Units 1
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce students to the federal, state, and local environmental requirements which apply to work performed by the California State Department of Water Resources.

A-IND 78G Power Lift and Four-Wheel Drive Units Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce students to the various types of power lift and four-wheel drive units used by the California State Department of Water Resources, their maintenance, their inspection, and their safe operation.

A-IND 78H Protective Coatings Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce students to corrosion, painting, and protective coating control programs.

A-IND 78J Small Boat Handling Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce students to the types of small boats used by the California State Departments of Water Resources and their transportation and safe operation.

A-IND 78K Mobile Cranes and Rigging Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce students to the use of mobile cranes, their safe operation and maintenance, and approved methods of rigging for lifting work.

A-IND 78L Motor Grader Operation Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce students to the components and operation of the types of motor graders used by the California State Department of Water Resources.

A-IND 78M Tractor Operations, Trenching, and Shoring Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce students to the types of tractor, trenching, and shoring operations conducted within the civil maintenance units of the California State Department of Water Resources.

A-IND 78N Pesticides and Herbicides Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce students to the types of pesticides and herbicides used by the California State Department of Water Resources, including uses, approved applications, and restric-

tions.

A-IND 78P Power Actuated Equipment Units 1
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce students to the requirements and safe operation of the powder-actuated fastening tools and rotary hammer drills used by the California State Department of Water Resources.

A-IND 92A Sheet Metal Units 4
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is intended for indentured apprentices and it is a course among a sequential number of courses covering the discipline. The theory portion of the sequential courses include mathematics, safety, tools, machines, blueprint reading, material, and estimating as applied to electricity. The course may be pursued for a maximum number of units in accordance with the number of class hours per semester. Students may opt for a three-hour or a six-hour lecture laboratory per week course. In addition to the one night per week class meeting, an additional 18 hours outside of class is required per semester.

A-IND 92B Sheet Metal Units 4
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is intended for indentured apprentices and it is a course among a sequential number of courses covering the discipline. The theory portion of the sequential courses include mathematics, safety, tools, machines, blueprint reading, material, and estimating as applied to electricity. The course may be pursued for a maximum number of units in accordance with the number of class hours per semester. Students may opt for a three-hour or a six-hour lecture laboratory per week course. In addition to the one night per week class meeting, an additional 18 hours outside of class is required per semester.

A-IND 93A Sheet Metal Units 4
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is intended for indentured apprentices and it is a course among a sequential number of courses covering the discipline. The theory portion of the sequential courses include mathematics, safety, tools, machines, blueprint reading, material, and estimating as applied to electricity. The course may be pursued for a maximum number of units in accordance with the number of class hours per semester. Students may opt for a three-hour or a six-hour lecture laboratory per week course. In addition to the one night per week class meeting, an additional 18 hours outside of class is required per semester.

A-IND 93B Sheet Metal Units 4
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is intended for indentured apprentices and it is a course among a sequential number of courses covering the discipline. The theory portion of the sequential courses include mathematics, safety, tools, machines, blueprint reading, material, and estimating as applied to electricity. The course may be pursued for a maximum number of units in accordance with the number of class hours per semester. Students may opt for a three-hour or a six-hour lecture laboratory per week course. In addition to the one night per week class meeting, an additional 18 hours outside of class is required per semester.

A-IND 94A Sheet Metal Units 4
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is intended for indentured apprentices and it is a course among a sequential number of courses covering the discipline. The theory portion of the sequential courses include mathematics, safety, tools, machines, blueprint reading, material, and estimating as applied to electricity. The course may be pursued for a maximum number of units in accordance with the number of class hours per semester. Students may opt for a three-hour or a six-hour lecture laboratory per week course. In addition to the one night per week class meeting, an additional 18 hours outside of class is required per semester.

A-IND 94B Sheet Metal Units 4
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is intended for indentured apprentices and it is a course among a sequential number of courses covering the discipline. The theory portion of the sequential courses include mathematics, safety, tools, machines, blueprint reading, material, and estimating as applied to electricity. The course may be pursued for a maximum number of units in accordance with the number of class hours per semester. Students may opt for a three-hour or a six-hour lecture laboratory per week course. In addition to the one night per week class meeting, an additional 18 hours outside of class is required per semester.

A-IND 95A Sheet Metal Units 4
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is intended for indentured apprentices and it is a course among a sequential number of courses covering the discipline. The theory portion of the sequential courses include mathematics, safety, tools, machines, blueprint reading, material, and estimating as applied to electricity. The course may be pursued for a maximum number of units in accordance with the number of class hours per semester. Students may opt for a three-hour or a six-hour lecture laboratory per week course. In addition to the one night per week class meeting, an additional 18 hours outside of class is required per semester.

A-IND 95B Sheet Metal Units 4
Prerequisites: None.

Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is intended for indentured apprentices and it is a course among a sequential number of courses covering the discipline. The theory portion of the sequential courses include mathematics, safety, tools, machines, blueprint reading, material, and estimating as applied to electricity. The course may be pursued for a maximum number of units in accordance with the number of class hours per semester. Students may opt for a three-hour or a six-hour lecture laboratory per week course. In addition to the one night per week class meeting, an additional 18 hours outside of class is required per semester.

Mechanical Technology

A-MEC 70A Machine Shop 1 Units 4
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is intended for indentured apprentices and it is a course among a sequential number of courses covering the discipline. The theory portion of the sequential courses include mathematics, safety, tools, machines, blueprint reading, material, and estimating as applied to electricity. The course may be pursued for a maximum number of units in accordance with the number of class hours per semester. Students may opt for a three-hour or a six-hour lecture laboratory per week course. In addition to the one night per week class meeting, an additional 18 hours outside of class is required per semester.

A-MEC 70B Machine Shop 1 Units 4
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is intended for indentured apprentices and it is a course among a sequential number of courses covering the discipline. The theory portion of the sequential courses include mathematics, safety, tools, machines, blueprint reading, material, and estimating as applied to electricity. The course may be pursued for a maximum number of units in accordance with the number of class hours per semester. Students may opt for a three-hour or a six-hour lecture laboratory per week course. In addition to the one night per week class meeting, an additional 18 hours outside of class is required per semester.

A-MEC 71A Machine Shop 2 Units 4
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is intended for indentured apprentices and it is a course among a sequential number of courses covering the discipline. The theory portion of the sequential courses include mathematics, safety, tools, machines, blueprint reading, material, and estimating as applied to electricity. The course may be pursued for a maximum number of units in accordance with the number of class hours per semester. Students may opt for a three-hour or a six-hour lecture laboratory per week course. In addition to the one night per week class meeting, an additional 18 hours outside of class is required per semester.

A-MEC 71B Machine Shop 2 Units 4
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is intended for indentured apprentices and it is a course among a sequential number of courses covering the discipline. The theory portion of the sequential courses include mathematics, safety, tools, machines, blueprint reading, material, and estimating as applied to electricity. The course may be pursued for a maximum number of units in accordance with the number of class hours per semester. Students may opt for a three-hour or a six-hour lecture laboratory per week course. In addition to the one night per week class meeting, an additional 18 hours outside of class is required per semester.

A-MEC 72A Machine Shop 3 Units 4
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is intended for indentured apprentices and it is a course among a sequential number of courses covering the discipline. The theory portion of the sequential courses include mathematics, safety, tools, machines, blueprint reading, material, and estimating as applied to electricity. The course may be pursued for a maximum number of units in accordance with the number of class hours per semester. Students may opt for a three-hour or a six-hour lecture laboratory per week course. In addition to the one night per week class meeting, an additional 18 hours outside of class is required per semester.

A-MEC 72B Machine Shop 3 Units 4
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is intended for indentured apprentices and it is a course among a sequential number of courses covering the discipline. The theory portion of the sequential courses include mathematics, safety, tools, machines, blueprint reading, material, and estimating as applied to electricity. The course may be pursued for a maximum number of units in accordance with the number of class hours per semester. Students may opt for a three-hour or a six-hour lecture laboratory per week course. In addition to the one night per week class meeting, an additional 18 hours outside of class is required per semester.

A-MEC 73A Machine Shop 4 Units 4
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is intended for indentured apprentices and it is a course among a sequential number of courses covering the discipline. The theory portion of the sequential courses include mathematics, safety, tools, machines, blueprint reading, material, and estimating as applied to electricity. The course may be pursued for a maximum number of units in accordance with the number of class hours per semester. Students may opt for a three-hour or a six-hour lecture laboratory per week course. In addition to the one night per week class meeting, an additional 18 hours outside of class is required per semester.

A-MEC 73B Machine Shop 4 Units 4
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.

Advisories: None.
This course is intended for indentured apprentices and it is a course among a sequential number of courses covering the discipline. The theory portion of the sequential courses include mathematics, safety, tools, machines, blueprint reading, material, and estimating as applied to electricity. The course may be pursued for a maximum number of units in accordance with the number of class hours per semester. Students may opt for a three-hour or a six-hour lecture laboratory per week course. In addition to the one night per week class meeting, an additional 18 hours outside of class is required per semester.

A-MEC 74A Basic Welding **Units 2**
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce basic welding skills. The course includes the basic theory, practice and application of arc welding and of oxy-acetylene cutting and welding.

A-MEC 74B Machine Shop **Units 2**
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce fundamental machine shop practices. The course includes safety procedures, lathe operation, mill operation, drilling operations, and print reading.

A-MEC 81 Plumbing and Welding **Units 4**
No course description available.

Arabic

ARAB 51 Elementary Arabic **Units 2.5**
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to the Arabic language and Arabic culture. Emphasis is placed on the following skills in the order given: listening, speaking, reading, and writing. The combined five units of ARAB 51 and 52 are equivalent to ARAB 1. (UC,CSU)

ARAB 52 Elementary Arabic **Units 2.5**
Prerequisites: Successful completion of ARAB 51.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to the Arabic language and Arabic culture. Emphasis is placed on the following skills in the order given: listening, speaking, reading, and writing. The combined five units of ARAB 51 and 52 are equivalent to ARAB 1. (UC, CSU)

ARAB 53 Elementary Arabic **Units 2.5**
Prerequisites: Successful completion of ARAB 1 or 52.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to the Arabic language and Arabic culture. Emphasis is placed on the following skills: listening, speaking, reading, and writing. The combined five units of ARAB 53 and 54 are equivalent to ARAB 2. (UC, CSU)

ARAB 54 Elementary Arabic **Units 2.5**
Prerequisites: Successful completion of ARAB 53.
Limitation on Enrollment: None.
Advisories: None.
This course is an introduction to the Arabic language and Arabic culture. Emphasis is placed on the following skills in the order given: listening, speaking, reading, and writing. The combined five units of ARAB 53 and 54 are equivalent to ARAB 2. (UC, CSU)

Architectural Drafting

ARCH 1 Basic Architectural Drafting **Units 3**
Prerequisites: None.
Corequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to drafting for the student majoring in architecture, interior design, or construction. Course topics include techniques and skills of drafting and design, introduction to building codes and construction methods, and basic construction documents used to communicate the building process. (CSU)

ARCH 2 Architectural Practice: Working Drawings **Units 6**
Prerequisites: ARCH 1 and ARCH 12; or ARCH 1 and E TECH 12; all with a grade of "C" or better.
Limitations on Enrollment: None.
Advisories: None.
This course is the study of building methods, processes, and the production of construction documentation as a communication medium. Design elements, building codes, structural components, and assembly procedures are emphasized. Students design a residence and produce a set of architectural working drawings. (CSU)

ARCH 3 Architectural Presentations **Units 3**
Prerequisites: ARCH 1 or equivalent; with a grade of "C" or better.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to various methods and approaches to architectural presentation, including model building, perspective development, and rendering. The course is oriented to the artistic presentation of architectural structures and includes work with color, black and white, and ink, utilizing various printing techniques commonly found in architectural offices. (UC, CSU)

ARCH 5 Architectural Detailing **Units 3**
Prerequisites: ARCH 1 and ARCH 12; or ARCH 1 and E TECH 12; all with a grade of "C" or better.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to drafting of construction details as they apply to various architectural structures. Building codes and regulations pertinent to the various details are emphasized. Computer-aided drafting is utilized to complete the construction documentation. (CSU)

ARCH 8 Materials of Construction Units 3
Prerequisites: None.
Corequisites: Reading level I with concurrent enrollment in reading.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to instruct the student in the uses and applications of processes and materials related to general construction. (CSU)

ARCH 9 Design Fundamentals Units 3
Prerequisites: ARCH 1 or concurrent enrollment in ARCH 1.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to the basic principles and theories of architectural design through discussion and simple or semi-abstract exercises. Students study and explore these topics as a means of establishing a design vocabulary. Studies also encompass development of sketching, presentation, and communication skills. (CSU)

ARCH 12 Computer-Aided Drafting Units 3
Prerequisites: E TECH 3 or ARCH 1, with a grade of "C" or better, or concurrent enrollment in ARCH 1.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to utilize Computer Aided Drafting (CAD) software on microcomputer CAD systems to produce a variety of drawings. Students learn the function and operation of typical CAD system components. Some of the course work allows students to work in field of individualized interest. (CSU)

ARCH 73 Blueprint Reading Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to prepare students for occupations requiring the ability to read and understand working drawings related to architectural structures. Residential and commercial blueprints and specifications are emphasized.

ARCH 87A Architectural Drafting Specialization Units 2
Prerequisites: ARCH 2.
Limitation on Enrollment: This course requires instructor approval to enroll.
Advisories: None.
This course is designed for advanced students in architectural drafting. Students complete an advanced specialized project developed in consultation with the instructor.

Art

ART 1A Art History Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is a survey of history of the visual arts of Europe from Prehistoric times to the Renaissance. (UC, CSU, CAN ART SEQ A with both ART 1A and ART 1B)

ART 1B Art History Units 3
Prerequisites: Reading level II.
Limitations on Enrollment: None.
Advisories: None.
This course is a survey of the history of architecture, painting, and sculpture of Europe from the Renaissance to the present. The influence of European art on modern art is discussed. (UC, CSU, CAN ART SEQ A with both ART 1A and ART 1B)

ART 2 Art History Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is a survey of the arts of primitive societies, and the arts of Africa, Oceania, Pre-Colombian America, India, China, and Japan. Art 1 is not a prerequisite for Art 2. (UC, CSU)

ART 3 Introduction to Art Units 3
Prerequisites: Reading level II.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to the basic concepts for the appreciation of the visual arts for the non-art major. (UC, CSU)

ART 4 Exploring Art Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is an appreciation course for non-art majors. It provides fundamental concepts, background, and experiences in visual expression. Line, color, texture, form, and volume are examined by a variety of two and three dimensional means. (UC, CSU)

ART 5 Selected Topics: Art Units 1-2
Prerequisites: Reading level II or concurrent enrollment in reading.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to offer instruction in one of the specialized areas of art not already covered by existing curricula. (UC,CSU)

ART 6 Color and Design Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is a beginning experience dealing with the principles and elements of design as the basis for all art activity. Through a variety of two and three dimensional media students analyze traditional and modern forms of art. (UC, CSU)

ART 7A Beginning Painting Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is a study and rendering of painted forms for effective communications. The course concentrates on the analysis and understanding of traditional painting styles and their modern variations. Techniques of painting are practiced with attention to a wide range of usage. (UC, CSU, CAN ART 10)

ART 7B Intermediate Painting Units 3
Prerequisites: ART 7A or equivalent.
Limitations on Enrollment: None.

Advisories: None.
This course is a study and rendering of painted forms for effective communications. The course emphasizes refinement and application of painting techniques for the solution of more complex design problems. (UC, CSU)

ART 7C Advanced Painting Units 3
Prerequisites: ART 7B or equivalent.
Limitations on Enrollment: None.
Advisories: None.
This course is a study and rendering of painted forms for effective communications. The course emphasizes the development of individual style and its application to solving specialized assignment related to professional goals. (UC, CSU)

ART 16 Descriptive Drawing and Rendering Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to pictorial drawings and rendering fundamentals. The course is applicable to industrial, interior, architectural, and landscape design. (UC, CSU).

ART 20A Introductory Sculpture Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is a study and use of material and form for effective three dimensional communications. The course concentrates on the analysis and understanding of traditional sculpture styles and their modern variations. Techniques of sculpting materials are practiced with attention to a wide range of usage. (UC, CSU, CAN ART 12)

ART 20B Beginning Sculpture Units 3
Prerequisites: ART 20A.
Limitations on Enrollment: None.
Advisories: None.
This course is a study and use of material and form for effective communications. The course emphasizes refinement and application of sculpture techniques for the solution of more complex design problems. (UC, CSU)

ART 20C Intermediate Sculpture Units 3
Prerequisites: ART 20B.
Limitations on Enrollment: None.
Advisories: None.
This course is a study and use of material and form for effective communications. The course emphasizes the development of individual style and its application to solving specialized assignments related to professional goals. (UC, CSU)

ART 20D Advanced Sculpture Units 3
Prerequisites: ART 20C.
Limitations on Enrollment: None.
Advisories: None.
This course is a study and use of material and form for effective communications. The course emphasizes refinement and application of sculpture techniques for the solution of more complex design problems. (UC, CSU)

ART 33A Beginning Drawing Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is a study of problem solving drawing for effective communications. The course concentrates on the analysis and understanding of traditional drawing styles and their modern variations. Techniques of drawing are practiced with attention to a wide range of usage. (UC, CSU, CAN ART 8)

ART 33B Intermediate Drawing Units 3
Prerequisites: ART 33A.
Limitations on Enrollment: None.
Advisories: None.
This course is a study of problem solving for effective communications. The course concentrates on the analysis and understanding of pertinent drawing styles and their functional variations. Techniques of drawing are practiced with attention to a wide range of usage. (UC, CSU)

ART 33C Figure Drawing Units 3
Prerequisites: ART 33B.
Limitations on Enrollment: None.
Advisories: None.
This course is a study of the human figure. The course concentrates on the analysis and understanding of traditional figure drawing styles and their modern variations. Techniques of awareness of form structure and the human figure are practiced with attention to expressive possibilities. (UC, CSU, CAN ART 24)

ART 36A Beginning Painting Units 1.5
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is a study and rendering of painted forms for effective communications. The course concentrates on the analysis and understanding of traditional painting styles and modern variations. Techniques of painting are practiced with attention to a wide range of usage. (UC, CSU)

ART 36B Beginning Painting Units 1.5
Prerequisites: ART 7A.
Limitations on Enrollment: None.
Advisories: None.
This course is a study and rendering of painted forms for effective communications. The course emphasizes refinement and application of painting techniques for the solution of more complex design problems. ART 36A-B is the equivalent of ART 7A. (UC, CSU)

ART 36C Intermediate Painting Units 1.5
Prerequisites: ART 36B.
Limitations on Enrollment: None.
Advisories: None.
This course is a study and rendering of painted forms for effective communications. The course emphasizes the development of individual style and its application to solving specialized assignments related to professional goals. ART 36C-D is the equivalent of ART 7B. (UC, CSU)

ART 36D Intermediate Painting Units 1.5
Prerequisites: ART 36C.
Limitations on Enrollment: None.

Advisories: None.
This course is a study and rendering of painted forms for effective communications. The course emphasizes the development of individual style and its application to solving specialized assignment related to professional goals. ART 36A-D is the equivalent of ART 7B. (UC, CSU)

ART 40A Beginning Printmaking Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to and survey of standard printmaking techniques and processes. The course concentrates on the analysis and understanding of traditional and contemporary styles. Techniques are practiced with attention to a wide range of usage and individual expression. (UC, CSU, CAN ART 20)

ART 40B Intermediate Printmaking Units 3
Prerequisites: ART 40A.
Limitations on Enrollment: None.
Advisories: None.
This course is a concentrated study of standard printmaking techniques and processes. The course provides for an in-depth exploration of traditional styles and their modern variations. Techniques and individual expression are practiced with attention to a wide range of usage. (UC, CSU)

ART 40C Advanced Printmaking Units 3
Prerequisites: ART 40B.
Limitations on Enrollment: None.
Advisories: None.
This course is a concentrated study of specific printmaking techniques chosen by the individual student with instructor supervision. This course provides for an in-depth exploration leading to a specific technique understanding. (UC, CSU)

ART 43A Beginning Drawing Units 1.5
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is a study of drawing methods and creative expression. The course concentrates on the analysis and understanding of traditional drawing styles and their modern variations. Techniques of drawing are practiced with attention to a wide range of usage. ART 43A-B is the equivalent of ART 33A. (UC, CSU)

ART 43B Beginning Drawing Units 1.5
Prerequisites: ART 43A.
Limitations on Enrollment: None.
Advisories: None.
This course is a study of drawing methods and creative expression. The course concentrates on the analysis and understanding of traditional drawing styles and their modern variations. Techniques of drawing are practiced with attention to a wide range of usage. ART 43A-B is the equivalent to ART 33A. (UC, CSU)

ART 43C Intermediate Drawing Units 1.5
Prerequisites: ART 43B.
Limitations on Enrollment: None.
Advisories: None.
This course is a study of problem solving for effective communications. The course concentrates on analysis and understanding of pertinent drawing styles and their functional variations. Techniques of drawing are practiced with attention to a wide range of usage. ART 43C-D is the equivalent of ART 33B. (UC, CSU)

ART 43D Intermediate Drawing Units 1.5
Prerequisites: ART 43C.
Limitations on Enrollment: None.
Advisories: None.
This course is a study of problem solving for effective communications. The course concentrates on the analysis and understanding of pertinent drawing styles and their functional variations. Techniques of drawing are practiced with attention to a wide range of usage. ART 43A-B is the equivalent of ART 33B. (UC, CSU)

ART 44A Introductory Ceramics Units 1.5
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is a study and use of clay form for effective communications. The course concentrates on the analysis and understanding of traditional ceramic styles and their modern variations. Techniques of ceramic building and throwing are practiced with attention to a wide range of usage. Art 44A-B is equivalent to ART 64A. (UC, CSU, CAN ART 6 with both ART 44A and 44B)

ART 44B Introductory Ceramics Units 1.5
Prerequisites: ART 44A.
Limitations on Enrollment: None.
Advisories: None.
This course is a study and use of clay form for effective communications. The course concentrates on the analysis and understanding of traditional ceramic style an their modern variations. Techniques of ceramic building and throwing are practiced with attention to wide range of usage. Art 44A-B is the equivalent of ART 64A. (UC, CSU, CAN ART 6 with both ART 44A and 44B)

ART 44C Beginning Ceramics Units 1.5
Prerequisites: ART 44B.
Limitations on Enrollment: None.
Advisories: None.
This course is a study and use of clay forms for effective communications. The course emphasizes refinement and application of ceramic techniques for the solution of more complex design problems. ART 44C-D is the equivalent of ART 64B. (UC, CSU)

ART 44D Beginning Ceramics Units 1.5
Prerequisites: ART 44C.
Limitations on Enrollment: None.
Advisories: None.
This course is a study and use of clay forms for effective communications. The course emphasizes refinement and application of ceramic techniques for the solution of more complex design problems. ART 44C-D is the equivalent of ART 64B. (UC, CSU)

ART 45A Intermediate Ceramics Units 1.5
Prerequisites: ART 44D.
Limitations on Enrollment: None.
Advisories: None.

This course is a study and rendering of ceramic forms for effective communications. The course emphasizes the development of individual style and its application to solving specialized assignments related to professional goals. ART 45A-B is the equivalent of ART 65A. (UC, CSU)

ART 45B Intermediate Ceramics Units 1.5
Prerequisites: ART 45A.
Limitations on Enrollment: None.
Advisories: None.
This course is a study and rendering of ceramic forms for effective communications. The course emphasizes the development of individual style and its application to solving specialized assignments related to professional goals. ART 45A-B is the equivalent of ART 65A. (UC, CSU)

ART 45C Advanced Ceramics Units 1.5
Prerequisites: ART 45B.
Limitations on Enrollment: None.
Advisories: None.
This course is a study and rendering of ceramic forms for effective communications. The course emphasizes the development of individual style and its application to solving specialized assignments related to professional goals. Class projects are emphasized. ART 45C-D is equivalent to ART 65B. (UC, CSU)

ART 45D Advanced Ceramics Units 1.5
Prerequisites: ART 45C.
Limitations on Enrollment: None.
Advisories: None.
This course is a study and rendering of ceramic forms for effective communications. The course emphasizes the development of individual style and its application to solving specialized assignments related to professional goals. Class projects are emphasized. ART 45C-D is equivalent to ART 65B. (UC, CSU)

ART 46A Introductory Sculpture Units 1.5
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is a study and use of material and form for effective three dimensional communications. The course concentrates on the analysis and understanding of traditional sculpture styles and their modern variations. Techniques of sculpting materials are practiced with attention to a wide range of usage. ART 46A-B is the equivalent of ART 20A. (UC, CSU, CAN ART 12 with both ART 46A and 46B)

ART 46B Introductory Sculpture Units 1.5
Prerequisites: ART 46A.
Limitations on Enrollment: None.
Advisories: None.
This course is a study and use of material forms for effective communications. The course concentrates on the analysis and understanding of traditional sculpture style and their modern variations. ART 46A-B is the equivalent of ART 20A. (UC, CSU, CAN ART 12 with both ART 46A and 46B)

ART 46C Beginning Sculpture Units 1.5
Prerequisites: ART 46B.
Limitations on Enrollment: None.
Advisories: None.
This course is a study and use of material form for effective communications. The course concentrates on the analysis and understanding of traditional sculpture styles and their modern variations. ART 46C-D is equivalent of ART 20B. (UC, CSU)

ART 46D Beginning Sculpture Units 1.5
Prerequisites: ART 46C.
Limitations on Enrollment: None.
Advisories: None.
This course is a study and use of material forms for effective communications. The course emphasizes refinement and application of sculpture techniques for the solution of more complex design problems. ART 46C-D is equivalent to ART 20B. (UC, CSU)

ART 48A Intermediate Sculpture Units 1.5
Prerequisites: ART 46D.
Limitations on Enrollment: None.
Advisories: None.
This course is a study and use of material and form for effective communications. The course emphasizes the development of individual skills and its application to solving specialized assignments related to professional goals. Techniques of sculpting materials are practiced with attention to a wide range of usage. ART 48A-B is equivalent to ART 20C. (UC, CSU)

ART 48B Intermediate Sculpture Units 1.5
Prerequisites: ART 48A.
Limitations on Enrollment: None.
Advisories: None.
This course is a study and use of material and form for communications. The course emphasizes the development of individual style and its application to solving specialized assignments. ART 48A-B is equivalent to ART 20C. (UC, CSU)

ART 48C Advanced Sculpture Units 1.5
Prerequisites: ART 48B.
Limitations on Enrollment: None.
Advisories: None.
This course is a study and use of material and form for effective communications. The course emphasizes refinement and application of sculpture techniques for the solution of more complex design problems. ART 48C-D is equivalent to ART 20D. (UC, CSU)

ART 48D Advanced Sculpture Units 1.5
Prerequisites: ART 48C.
Limitations on Enrollment: None.
Advisories: None.
This course is a study and use of material and form for effective communications. The course emphasizes the development of individual style and refinement and application of sculpture techniques for the solution of more complex design problems. ART 48C-D is equivalent to ART 20D. (UC, CSU)

ART 50H Special Studies: Art Units 1-2
Prerequisites: Completion of survey course with grade of "B" or better and presentation of project acceptable to the instructor and division chairperson.

Limitations on Enrollment: None.
Advisories: None.
This course is open to all students qualified to do advanced work in the field. The course may include research, directed reading, field work, or other advanced study and the course may be repeated for a maximum of four units. (UC, CSU)

ART 64A Introductory Ceramics Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed as a study and use of clay forms for effective communication. The course concentrates on the analysis and understanding of traditional ceramic styles and their modern variations. Techniques of ceramic building and throwing are practiced with attention to a wide range of usage. (UC, CSU, CAN ART 6)

ART 64B Beginning Ceramics Units 3
Prerequisites: ART 64A.
Limitations on Enrollment: None.
Advisories: None.
This course is a study and use of clay forms for effective communications. The course emphasizes refinement and application of ceramic techniques for the solution of more complex design problems. (UC, CSU)

ART 65A Intermediate Ceramics Units 3
Prerequisites: ART 64B.
Limitations on Enrollment: None.
Advisories: None.
This course is a study and rendering of ceramic forms for effective communications. The course emphasizes the development of individual style and its application to solving specialized assignments related to professional goals. (UC, CSU)

ART 65B Advanced Ceramics Units 3
Prerequisites: ART 65A.
Limitations on Enrollment: None.
Advisories: None.
This course is a study and rendering of ceramic forms for effective communications. The course emphasizes the development of individual style and its application to solving specialized assignments related to professional goals. Class projects are stressed. (UC, CSU)

ART 80 Selected Topics: Art Units 1-2
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to offer instruction in one of the specialized areas of art not already covered by existing curricula.

Astronomy

ASTRO 1 Introductory Astronomy Units 3
Prerequisites: Reading level II and Math level II; MATH 80 with a grade of "C" or better.
Limitations on Enrollment: None.
Advisories: None.
This course is a non-mathematical, descriptive course in general astronomy dealing with the nature and evolution of solar systems, stars, galaxies, and the universe; the planets, moon, meteors, comets, and other members of our solar system are included. The college planetarium is used for constellation, planet, and galaxy identification as well as demonstrating space and time coordinates. (UC, CSU)

ASTRO 1L Astronomy Laboratory Units 1
Prerequisites: Math level II; completion of or concurrent enrollment in ASTRO 1, 2, or 4.
Limitations on Enrollment: None.
Advisories: None.
This course is laboratory work performing quantitative experiments of physical phenomena relating to astronomy. The experiments include working in the planetarium with the telescope. (UC, CSU)

ASTRO 50H Special Studies: Astronomy Units 1-2
Prerequisites: Reading level II; completion of survey course with grade of "B" or better and presentation of a project acceptable to the instructor and division chairperson.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to give students an opportunity to research a problem in astronomy using the college's planetarium, telescopes, laboratory, or library. The project must be acceptable to a member of the astronomy staff and approved by the division chairperson. This course may be repeated for a maximum of four units. (UC, CSU)

Athletics

ATH 50 Soccer Team: Men Units 2
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is part of the intercollegiate athletic program of Delta College. Delta College participates in the Bay Valley Conference. (UC, CSU)

ATH 51 Water Polo Team: Men Units 2
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is part of the intercollegiate athletic program of Delta College. Delta College participates in the Bay Valley Conference. (UC, CSU)

ATH 52 Football Team: Men Units 2
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is part of the intercollegiate athletic program of Delta College. Delta College participates in the Northern California Football Conference. (UC, CSU)

ATH 53 Cross Country Team: Men Units 2
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is part of the intercollegiate athletic program of Delta College. Delta College participates in the Bay Valley Conference. (UC, CSU)

ATH 54 Baseball Team: Men Units 2
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is part of the intercollegiate athletic program of Delta College. Delta College participates in the Bay Valley Conference. (UC, CSU)

ATH 55 Golf Team: Men Units 2
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is part of the intercollegiate athletic program of Delta College. Delta College participates in the Bay Valley Conference. (UC, CSU)

ATH 56 Basketball Team: Men Units 2
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is part of the intercollegiate athletic program of Delta College. Delta College participates in the Bay Valley Conference. (UC, CSU)

ATH 57 Track Team: Men Units 2
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is part of the intercollegiate athletic program of Delta College. Delta College participates in the Bay Valley Conference. (UC, CSU)

ATH 58 Wrestling Team: Men Units 2
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is part of the intercollegiate athletic program of Delta College. Delta College participates in the Bay Valley Conference. (UC, CSU)

ATH 59 Tennis Team: Men Units 2
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is part of the intercollegiate athletic program of Delta College. Delta College participates in the Bay Valley Conference. (UC, CSU)

ATH 60 Swimming and Diving Team: Men Units 2
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is part of the intercollegiate athletic program of Delta College. Delta College participates in the Bay Valley Conference. (UC, CSU)

ATH 61 Soccer Team: Women Units 2
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is part of the intercollegiate athletic program of Delta College. Delta College participates in the Bay Valley Conference. (UC, CSU)

ATH 62 Volleyball Team: Women Units 2
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is part of the intercollegiate athletic program of Delta College. Delta College participates in the Bay Valley Conference. (UC, CSU)

ATH 63 Swimming and Diving Team: Women Units 2
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is part of the intercollegiate athletic program of Delta College. Delta College participates in the Bay Valley Conference. (UC,CSU)

ATH 64 Basketball Team: Women Units 2
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is part of the intercollegiate athletic program of Delta College. Delta College participates in the Bay Valley Conference. (UC, CSU)

ATH 65 Softball Team: Women Units 2
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is part of the intercollegiate athletic program of Delta College. Delta College participates in the Bay Valley Conference. (UC, CSU)

ATH 66 Tennis Team: Women Units 2
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is part of the intercollegiate athletic program of Delta College. Delta College participates in the Bay Valley Conference. (UC, CSU)

ATH 68 Track Team: Women Units 2
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is part of the intercollegiate athletic program of Delta College. Delta College participates in the Bay Valley Conference. (UC, CSU)

ATH 69 Cross Country Team: Women Units 2
Prerequisites: None.
Limitations on Enrollment: None.

Advisories: None.
This course is part of the intercollegiate athletic program of Delta College. Delta College participates in the Bay Valley Conference. (UC, CSU)

Automotive Technology

AUTO 50 Automatic Transmissions and Transaxles Units 5
Prerequisites: AUTO 62.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to prepare the student to analyze, adjust, service, and repair automatic transmissions and transaxles on foreign and domestic automobiles. (CSU)

AUTO 51 Manual Drivetrain and Axles Units 5
Prerequisites: AUTO 62.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to prepare the student to analyze, service, and repair: differentials, standard transmissions and transaxles, front-wheel drive axles, drivelines, four-wheel drive systems, and clutch systems. (CSU)

AUTO 52 Engine Rebuilding Units 7
Prerequisites: AUTO 64.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to prepare the student to analyze, adjust, service, and repair gasoline-powered automobile engines. This course includes precision machining operations and the complete rebuilding of an engine. (CSU)

AUTO 53 Brakes, Suspension, and Steering Units 7
Prerequisites: AUTO 62.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to prepare the student to analyze, adjust, service, and repair: automotive brakes, suspension, and steering systems. (CSU)

AUTO 54 Starting, Charging, and Electrical Systems Units 5
Prerequisites: AUTO 63 or DIESL 49.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to prepare the student to effectively diagnose and repair automotive starting, charging, and electrical systems. (CSU)

AUTO 55 Ignition Systems and Electronic Engine Controls Units 7
Prerequisites: AUTO 63.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to prepare the student to diagnose and repair automotive engine performance problems and driveability malfunction-related failures. The student completing the requirements of AUTO 55 Ignition Systems and Electronic Engine Controls and AUTO 56 Fuel Management and Computer Controls is eligible to test to receive certification for the approved Clean Air Car Course from the State of California Bureau of Automotive Repair. (CSU)

AUTO 56 Fuel Management and Computer Controls Units 7
Prerequisites: AUTO 63.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to prepare the student to troubleshoot and diagnose automotive fuel-injection systems, engine computer systems, emission systems, and some carburetion systems. The student completing the requirements of AUTO 55 Ignition Systems and Electronic Engine Controls and AUTO 56 Fuel Management and Computer Controls is eligible to test to receive certification for the approved Clean Air Car Course from the State of California Bureau of Automotive Repair. (CSU)

AUTO 57 Air Conditioning, Heating, and Electrical Systems Units 5
Prerequisites: AUTO 63.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to prepare the student to diagnose and repair air conditioning, heating and specialized electrical accessories systems. (CSU)

AUTO 62 Brakes, Suspensions, and Powertrain Systems Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to prepare the student to analyze, adjust, and repair basic automotive brake, suspension, steering, and drivetrain systems. (CSU)

AUTO 63 Fuel and Electrical Systems Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to prepare the student to analyze, adjust, and repair basic automotive electrical, ignition, and fuel management systems. (CSU)

AUTO 64 Basic Engines Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to the fundamentals of two-stroke engines, oils, lubrication, safety inspections, and related mathematics and measurement. (CSU)

AUTO 69V Internship: Auto Mechanics Units 1-8
Prerequisites: None.
Limitations on Enrollment: The student must enroll in a course that is directly related to the auto mechanics internship. The student must enroll in a minimum of 7 units during the semester including internship units. For summer session, the student must enroll in one related course in addition to internship. The combined total number of units a student may take in internship, work experience, and occupational practice may not exceed a maximum of 16 units. Participation requires submission and approval of internship program objectives and an employer internship agreement.
Advisories: GUID 30, 31, 32, 33.
This course is designed for students participating in an occupational internship in auto mechanics. Application of discipline-related

skills and knowledge of Secretaries Commission on Achieving Necessary Skills (SCANS) competencies is emphasized. Each student is engaged in a specific research project or on-the-job learning activities under the supervision of a worksite supervisor and a college internship instructor. (CSU)

AUTO 69W Internship: Auto Body Technology **Units 1-8**

Prerequisites: None.
Limitations on Enrollment: The student must enroll in a course that is directly related to the auto body technology internship. The student must enroll in a minimum of 7 units during the semester including internship units. For summer session, the student must enroll in one related course in addition to internship. The combined total number of units a student may take in internship, work experience, and occupational practice may not exceed a maximum of 16 units. Participation requires submission and approval of internship program objectives and an employer internship agreement.
Advisories: GUID 30, 31, 32, 33.
This course is designed for students participating in an occupational internship in auto body technology. Application of discipline-related skills and knowledge of Secretaries Commission on Achieving Necessary Skills (SCANS) competencies is emphasized. Each student is engaged in a specific research project or on-the-job learning activities under the supervision of a worksite supervisor and a college internship instructor. (CSU)

AUTO 75 Selected Topics: Automotive Technology **Units 1-2**

Prerequisites: Reading level II.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to enable the College to offer instruction in one of the specialized areas of automotive technology not already covered by existing curriculum.

AUTO 80A Body and Fender **Units 2**

Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to emphasize the basic auto body safety standards. Course topics include elementary sheetmetal repair, auto body welding, metal finishing, plastic fillers, grinding, and shrinking.

AUTO 80B Body and Fender **Units 2**

Prerequisites: AUTO 80A
Limitations on Enrollment: None.
Advisories: None.
This course is designed to emphasize MIG welding of light gauge material, basic auto body hand tools, advanced metal finishing, grinding, filling, removal of body parts, and basic painting procedures.

AUTO 80C Body and Fender **Units 2**

Prerequisites: AUTO 80A
Limitations on Enrollment: None.
Advisories: None.
This course is designed to emphasize frame and alignment equipment and procedures, grinding techniques, shrinking gouges and aluminum, replacement of trim and upholstery, and painting procedures.

AUTO 80D Body and Fender **Units 2**

Prerequisites: AUTO 80A.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to emphasize MIG welding of galvanized and aluminum materials, flux core welding, plasma arc cutting, replacement of structural components, restoration of corrosion protection, and glass service.

AUTO 80E Body and Fender **Units 2**

Prerequisites: AUTO 80A
Limitations on Enrollment: None.
Advisories: None.
This course is designed to emphasize the utilization of frame straightening equipment, body alignment procedures, removal and installation of headliners, fiberglass body preparation and repair, and plastic parts repair.

AUTO 80F Body and Fender **Units 2**

Prerequisites: AUTO 80A
Limitations on Enrollment: None.
Advisories: None.
This course is designed to emphasize frame measurement and body alignment systems, body panel removal and replacements, specialized plastic repairs, and painting.

AUTO 80G Body and Fender **Units 2**

Prerequisites: AUTO 80A
Limitations on Enrollment: None.
Advisories: None.
This course is designed to emphasize arc welding, spot welding, MIG welding, metal straightening, fiberglass body repair, unibody structural panel repair, frame repair, and suspension and steering systems.

AUTO 80H Body and Fender **Units 2**

Prerequisites: AUTO 80A
Limitations on Enrollment: None.
Advisories: None.
This course is designed to emphasize paint spraying, rubbing and polishing techniques, custom painting tools, materials and equipment, introduction to electromechanical components, overview of apprenticeship programs, and awareness of auto body business practices.

AUTO 81A Introductory Auto-Body Repair Laboratory **Units 1**

Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to provide additional laboratory experiences for students enrolled in AUTO 84A. Areas of emphasis include sheet metal welding, metal straightening and finishing, and filling of materials.

AUTO 81B Beginning Auto-Body **Units 1**

Repair Laboratory

Prerequisites: AUTO 84A.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to provide additional laboratory experiences for students enrolled in AUTO 84B. Areas of emphasis include auto body collision repair, refinement of metal working skills, and removing, repairing, and replacing trim and upholstery.

AUTO 81C Intermediate Auto-Body Repair Laboratory Units 1

Prerequisites: AUTO 84B.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to provide additional laboratory experiences for students enrolled in AUTO 84C. Areas of emphasis include basic unibody repair, fiberglass body repair, plastic parts repair, roof panel repair and replacement, and complete vehicle painting.

AUTO 81D Advanced Auto-Body Repair Laboratory Units 1

Prerequisites: AUTO 84C.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to provide additional laboratory experiences for students enrolled in AUTO 84C. Areas of emphasis include advanced unibody repair and repair of suspension and steering systems. Students are assigned shop work which is evaluated against industry standards.

AUTO 84A Introductory Auto-Body Repair Units 5

Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is a theory and laboratory course offering in-depth training in sheetmetal welding, metal straightening and finishing, and filling of metals. Painting of a car is introduced.

AUTO 84B Beginning Auto-Body Repair Units 5

Prerequisites: AUTO 84A.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to allow students to work on more complicated types of auto body damage to further refine basic metal working skills. The removing, repairing, and aligning of trim and upholstery panels are covered.

AUTO 84C Intermediate Auto-Body Repair Units 5

Prerequisites: AUTO 84B.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to give students instruction in basic unibody repair, fiberglass body repair, plastic parts repair, and roof panel replacement and repair. Students learn and perform the steps necessary to complete a full-car paint job.

AUTO 84D Advanced Auto-Body Repair Units 5

Prerequisites: AUTO 84C.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to advance students to more complicated portions of unibody repair. The repair of suspension and steering systems are covered. Students perform assigned jobs which must be performed within time constraints imposed by employers.

AUTO 87A Automobile Mechanics Specialization Units 3-4

Prerequisites: AUTO 52 or AUTO 53.
Limitation on Enrollment: This course requires instructor approval to enroll.
Advisories: None.
This course is designed for advanced students in automotive mechanics. Students complete an advanced specialized project developed in consultation with the instructor.

AUTO 87B Auto Electrics Specialization Units 3-4

Prerequisites: AUTO 55 or AUTO 56.
Limitation on Enrollment: This course requires instructor approval to enroll.
Advisories: None.
This course is designed for advanced students in automotive electrics. Students complete an advanced specialized project developed in consultation with the instructor.

AUTO 87C Auto Body Specialization Units 3-4

Prerequisites: AUTO 84D.
Limitation on Enrollment: This course requires instructor approval to enroll.
This course is designed for advanced students in auto body. Students complete an advanced specialized project developed in consultation with the instructor.