## Section IV — Description of Courses

### Administration of Justice

- **AJ 21** Criminal Justice in Society ........................................ 108
- **AJ 22** Concepts of Criminal Law ........................................ 108
- **AJ 23** Principles and Procedures of The Justice System .................. 108
- **AJ 24** Legal Aspects of Evidence ....................................... 108
- **AJ 25** Criminal Investigation ........................................... 108
- **AJ 26** Patrol Procedures .................................................. 108
- **AJ 28** Juvenile Law and Procedures .................................... 108
- **AJ 30A** Critical Issues in The Justice System ............................ 108
- **AJ 31** Report Preparation ................................................ 108
- **AJ 39** Crime Prevention .................................................. 108
- **AJ 40** Community Relations ............................................... 108
- **AJ 41** Narcotics Investigation and Control ................................ 109
- **AJ 50H** Special Studies: Administration of Justice ....................... 109
- **AJ 51** Introduction to Correctional Science ................................ 109
- **AJ 53** Correctional Interviewing and Interventions ....................... 109
- **AJ 54** Introduction to Probation and Parole ................................ 109
- **AJ 55** Control and Supervision in Corrections ............................ 109
- **AJ 57** Legal Aspects of Corrections ...................................... 109
- **AJ 69V** Internship: Administration of Justice ............................ 109
- **AJ 71** Basic Academy: Institutions ....................................... 109
- **AJ 73** Basic Academy: Corrections ........................................ 109
- **AJ 85A** Reserve Officer Beginning: Level III Module A ..................... 110
- **AJ 85B** Reserve Officer Intermediate: Level II Module B ................ 110
- **AJ 85C** Reserve Officer Advanced: Level I Module C ....................... 110
- **AJ 89** Department of Corrections Penal Code-832 ........................ 110
- **AJ 90** Selected Topics: Administration of Justice ......................... 110
- **AJ 91** Private Security Academy .......................................... 110
- **AJ 92V** Work Experience: Correctional Science ........................... 110
- **AJ 93** Basic Peace Officer Academy ...................................... 111

### Agriculture Business

- **AGBUS 10** Agricultural Accounting ....................................... 111
- **AGBUS 12** Agricultural Economics ......................................... 111
- **AGBUS 13** Agriculture and Natural - Resource Mathematics ............... 111
- **AGBUS 15** Agribusiness Computer Applications ............................ 111
- **AGBUS 46** Agricultural Marketing ......................................... 111
- **AGBUS 50H** Special Studies: Agriculture Business ....................... 111
- **AGBUS 69V** Internship: Agricultural Business ............................ 111
- **AGBUS 75** Selected Topics: Agriculture .................................... 111
- **AGBUS 96V** Work Experience: Agricultural Business ...................... 112

### Agriculture Engineering

- **AGEGR 20A** Agricultural and Natural - Resources Shop Skills .......... 112
- **AGEGR 21** Agricultural Welding ........................................... 112
- **AGEGR 30A** Introduction to Industrial and Commercial Engines ........... 112
- **AGEGR 30B** Industrial and Commercial Engines ............................ 112
- **AGEGR 30C** Industrial Equipment: Electrical and Electronic Systems .... 112
- **AGEGR 30D** Industrial Equipment: Power Trains ............................ 112
- **AGEGR 33** Equipment Maintenance and Operation ........................... 112
- **AGEGR 50H** Special Studies: Agriculture Engineering ....................... 112
SECTION IV,— Description of Courses

Animal Husbandry Sciences .......................................................... 113
AH SC 10 Principles of Animal Science ......................................... 113
AH SC 10L Principles of Animal Science Laboratory ....................... 113
AH SC 11A Introduction to Livestock Evaluation ............................ 113
AH SC 11B Beginning Livestock Evaluation .................................... 114
AH SC 11C Intermediate Livestock Evaluation ............................... 114
AH SC 11D Advanced Livestock Evaluation ................................... 114
AH SC 25A Introduction to Livestock Presentation .......................... 114
AH SC 25B Beginning Livestock Presentation ................................ 114
AH SC 25C Intermediate Livestock Presentation .............................. 114
AH SC 25D Advanced Livestock Presentation ................................ 114
AH SC 28 Basic Horse Husbandry ................................................ 114
AH SC 34 Animal Health and Sanitation ....................................... 114
AH SC 36 Livestock Breeding .................................................... 114
AH SC 50H Special Studies: Animal Husbandry Sciences ................. 114
AH SC 69V Internship: Animal Science ....................................... 115
AH SC 75 Selected Topics: Animal Husbandry Science .................... 115
AH SC 96V Work Experience: Animal Husbandry Science ................ 115

Anthropology ............................................................................... 115
ANTHR 1 Cultural Anthropology .................................................. 115
ANTHR 2 Physical Anthropology .................................................. 115
ANTHR 2L Physical Anthropology Laboratory ............................... 115
ANTHR 4 Introduction to Linguistics .......................................... 115
ANTHR 6 Introduction to North American Indians ......................... 115
ANTHR 10 Introduction to Archaeology ....................................... 116
ANTHR 12A Beginning Field Archaeology .................................... 116
ANTHR 12B Intermediate Field Archaeology .................................. 116
ANTHR 15 Selected Topics: Anthropology .................................... 116
ANTHR 50H Special Studies: Anthropology .................................. 116

Arabic ......................................................................................... 116
ARAB 51 Elementary Arabic ....................................................... 116
ARAB 52 Elementary Arabic ....................................................... 116
ARAB 53 Elementary Arabic ....................................................... 116
ARAB 54 Elementary Arabic ....................................................... 116

Architectural Drafting .................................................................. 116
ARCH 1 Basic Architectural Drafting ............................................ 116
ARCH 2 Architectural Practice: Working Drawings ......................... 116
ARCH 3 Architectural Presentations ............................................. 117
ARCH 5 Architectural Detailing .................................................... 117
ARCH 8 Materials of Construction .............................................. 117
ARCH 9 Design Fundamentals .................................................... 117
ARCH 12 Computer-Aided Drafting ............................................ 117
ARCH 69V Internship: Architecture ............................................ 117
ARCH 73 Blueprint Reading ....................................................... 117
ARCH 87A Architectural Drafting Specialization ............................. 117

Art ......................................................................................... 117
ART 1A  Art History .......................................................... 117
ART 1B  Art History .......................................................... 117
ART 2    Art History .......................................................... 118
ART 3    Introduction to Art .................................................. 118
ART 4    Exploring Art ........................................................ 118
ART 5    Selected Topics: Art ................................................. 118
ART 6    Color and Design ..................................................... 118
ART 7A   Beginning Painting ................................................... 118
ART 7B   Intermediate Painting .............................................. 118
ART 7C   Advanced Painting ................................................... 118
ART 7D   Descriptive Drawing and Rendering .................................... 118
ART 20A  Introductory Sculpture ............................................. 118
ART 20B  Beginning Sculpture ............................................... 118
ART 20C  Intermediate Sculpture ............................................ 118
ART 20D  Advanced Sculpture ............................................... 118
ART 33A  Beginning Drawing ................................................... 118
ART 33B  Intermediate Drawing .............................................. 118
ART 33C  Figure Drawing ...................................................... 119
ART 36A  Beginning Painting ................................................... 119
ART 36B  Beginning Painting ................................................... 119
ART 36C  Intermediate Painting .............................................. 119
ART 36D  Intermediate Painting .............................................. 119
ART 40A  Beginning Printmaking ............................................. 119
ART 40B  Intermediate Printmaking ......................................... 119
ART 40C  Advanced Printmaking ............................................. 119
ART 43A  Beginning Drawing ................................................... 119
ART 43B  Beginning Drawing ................................................... 119
ART 43C  Intermediate Drawing .............................................. 119
ART 43D  Intermediate Drawing .............................................. 119
ART 44A  Introductory Ceramics .............................................. 120
ART 44B  Introductory Ceramics .............................................. 120
ART 44C  Beginning Ceramics ................................................ 120
ART 44D  Beginning Ceramics ................................................ 120
ART 45A  Intermediate Ceramics ............................................. 120
ART 45B  Intermediate Ceramics ............................................. 120
ART 45C  Advanced Ceramics ................................................ 120
ART 45D  Advanced Ceramics ................................................ 120
ART 46A  Introductory Sculpture ............................................. 120
ART 46B  Introductory Sculpture ............................................. 120
ART 46C  Beginning Sculpture ............................................... 121
ART 46D  Beginning Sculpture ............................................... 121
ART 48A  Intermediate Sculpture ............................................. 121
ART 48B  Intermediate Sculpture ............................................. 121
ART 48C  Advanced Sculpture ................................................ 121
ART 48D  Advanced Sculpture ................................................ 121
ART 50H  Special Studies: Art ................................................. 121
ASTRO 1  Introductory Astronomy .......................................... 122
ASTRO 1L Astronomy Laboratory ........................................... 122
ASTRO 50H Special Studies: Astronomy .................................... 122

Astronomy ................................................................. 122
Athletics ................................................................. 122
### Description of Courses

**ATH 50** Soccer Team: Men ..................................................... 122
**ATH 51** Water Polo Team: Men ................................................ 122
**ATH 52** Football Team: Men ................................................... 122
**ATH 53** Cross Country Team: Men .............................................. 122
**ATH 54** Baseball Team: Men ................................................... 122
**ATH 55** Golf Team: Men ....................................................... 122
**ATH 56** Basketball Team: Men ................................................. 122
**ATH 57** Track Team: Men ...................................................... 122
**ATH 58** Wrestling Team: Men .................................................. 122
**ATH 59** Tennis Team: Men ..................................................... 122
**ATH 60** Swimming and Diving Team: Men ........................................ 122
**ATH 61** Soccer Team: Women ................................................... 123
**ATH 62** Volleyball Team: Women ............................................... 123
**ATH 63** Swimming and Diving Team: Women ..................................... 123
**ATH 64** Basketball Team: Women ............................................... 123
**ATH 65** Softball Team: Women ................................................ 123
**ATH 66** Tennis Team: Women .................................................... 123
**ATH 67** Water Polo Team: Women .............................................. 123
**ATH 68** Track Team: Women .................................................... 123
**ATH 69** Cross Country Team: Women ............................................ 123

**Automotive Technology** .......................................................... 123
**AUTO 50** Automatic Transmissions and Transaxles ........................................... 123
**AUTO 51** Manual Drivetrain and Axles ............................................ 123
**AUTO 52** Engine Rebuilding .................................................... 123
**AUTO 53** Brakes, Suspension, and Steering ....................................... 123
**AUTO 54** Starting, Charging, and Electrical Systems .................................. 123
**AUTO 55** Ignition Systems and Electronic Engine Controls .................................. 124
**AUTO 56** Fuel Management and Computer Controls ...................................... 124
**AUTO 57** Air Conditioning, Heating, and Electrical Systems .................................. 124
**AUTO 62** Brakes, Suspensions, and Powertrain Systems .................................... 124
**AUTO 63** Fuel and Electrical Systems .......................................... 124
**AUTO 64** Basic Engines ........................................................ 124
**AUTO 69V** Internship: Auto Mechanics ............................................. 124
**AUTO 69W** Internship: Auto Body Technology ......................................... 124
**AUTO 75** Selected Topics: Automotive Technology ........................................... 124
**AUTO 80A** Body and Fender ...................................................... 124
**AUTO 80B** Body and Fender ...................................................... 125
**AUTO 80C** Body and Fender ...................................................... 125
**AUTO 80D** Body and Fender ...................................................... 125
**AUTO 80E** Body and Fender ...................................................... 125
**AUTO 80F** Body and Fender ...................................................... 125
**AUTO 80G** Body and Fender ...................................................... 125
**AUTO 80H** Body and Fender ...................................................... 125
**AUTO 81A** Introductory Auto-Body Repair Laboratory ...................................... 125
**AUTO 81B** Beginning Auto-Body Repair Laboratory ....................................... 125
**AUTO 81C** Intermediate Auto-Body Repair Laboratory ..................................... 125
**AUTO 81D** Advanced Auto-Body Repair Laboratory ...................................... 125
**AUTO 84A** Introductory Auto-Body Repair ........................................... 125
**AUTO 84B** Beginning Auto-Body Repair ............................................... 125
**AUTO 84C** Intermediate Auto-Body Repair ............................................ 126
**AUTO 84D** Advanced Auto-Body Repair ............................................. 126
**AUTO 87A** Automobile Mechanics Specialization ......................................... 126
**AUTO 87B** Auto Electrics Specialization ............................................ 126
**AUTO 87C** Auto Body Specialization ............................................... 126
**AUTO 90A** Introduction to Closed Loop Fuel Control ...................................... 126
**AUTO 90B** Throttle Body Injection Systems .............................................. 126
**AUTO 90C** Port Fuel Injection Systems ............................................... 126
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTO 90D</td>
<td>Enhanced Emission Test Failure Diagnosis</td>
<td>126</td>
</tr>
<tr>
<td>AUTO 90E</td>
<td>On Board Diagnostics</td>
<td>126</td>
</tr>
<tr>
<td>AUTO 90F</td>
<td>Driveability and Emission Diagnosis</td>
<td>126</td>
</tr>
<tr>
<td>AUTO 90I</td>
<td>Air Conditioning Systems and Service</td>
<td>127</td>
</tr>
<tr>
<td>AUTO 90J</td>
<td>Air Conditioning Controls</td>
<td>127</td>
</tr>
<tr>
<td>AUTO 90L</td>
<td>Automotive Electrical Circuits and Digital Meters</td>
<td>127</td>
</tr>
<tr>
<td>AUTO 90M</td>
<td>Automotive Electronics</td>
<td>127</td>
</tr>
<tr>
<td>AUTO 90N</td>
<td>Automotive Electronics</td>
<td>127</td>
</tr>
<tr>
<td>AUTO 90P</td>
<td>Electronic Ignition</td>
<td>127</td>
</tr>
<tr>
<td>AUTO 90Q</td>
<td>Starting and Charging Systems</td>
<td>127</td>
</tr>
<tr>
<td>AUTO 90R</td>
<td>Heavy Duty Electrical Diagnosis</td>
<td>127</td>
</tr>
<tr>
<td>AUTO 90U</td>
<td>Four-Wheel Antilock Brakes</td>
<td>127</td>
</tr>
<tr>
<td>AUTO 90V</td>
<td>Rear Wheel Antilock Brakes</td>
<td>127</td>
</tr>
<tr>
<td>AUTO 90W</td>
<td>Teves Mark II Antilock Brake System</td>
<td>127</td>
</tr>
<tr>
<td>AUTO 90X</td>
<td>Teves Mark IV Antilock Brake System</td>
<td>128</td>
</tr>
<tr>
<td>AUTO 90Y</td>
<td>Bosch 2U and Bosch 5 Antilock Brake System</td>
<td>128</td>
</tr>
<tr>
<td>AUTO 90Z</td>
<td>Delphi Chassis Antilock Brake System</td>
<td>128</td>
</tr>
<tr>
<td>A-AUT 50</td>
<td>Automatic Transmissions and Transaxles</td>
<td>128</td>
</tr>
<tr>
<td>A-AUT 51</td>
<td>Manual Drivetrain and Axles</td>
<td>128</td>
</tr>
<tr>
<td>A-AUT 52</td>
<td>Engine Rebuilding</td>
<td>128</td>
</tr>
<tr>
<td>A-AUT 53</td>
<td>Brakes, Suspension, and Steering</td>
<td>128</td>
</tr>
<tr>
<td>A-AUT 54</td>
<td>Starting, Charging, and Electrical Systems</td>
<td>128</td>
</tr>
<tr>
<td>A-AUT 55</td>
<td>Ignition Systems and Electronic Engine Controls</td>
<td>128</td>
</tr>
<tr>
<td>A-AUT 56</td>
<td>Fuel Management and Computer Controls</td>
<td>128</td>
</tr>
<tr>
<td>A-AUT 57</td>
<td>Air Conditioning, Heating, and Electrical Systems</td>
<td>128</td>
</tr>
<tr>
<td>A-AUT 71A</td>
<td>Manual Drive Train and Axles</td>
<td>128</td>
</tr>
<tr>
<td>A-AUT 71B</td>
<td>Brakes, Suspension, and Steering</td>
<td>129</td>
</tr>
<tr>
<td>A-AUT 72A</td>
<td>Starting, Charging, and Electrical Systems</td>
<td>129</td>
</tr>
<tr>
<td>A-AUT 73A</td>
<td>Engine Performance and Ignition Systems</td>
<td>129</td>
</tr>
<tr>
<td>A-AUT 73B</td>
<td>Engine Performance and Fuel Systems</td>
<td>129</td>
</tr>
<tr>
<td>A-AUT 78A</td>
<td>Auto Body Fundamentals</td>
<td>129</td>
</tr>
<tr>
<td>A-AUT 78B</td>
<td>Basic Auto Body Repair and Painting</td>
<td>129</td>
</tr>
<tr>
<td>A-AUT 79A</td>
<td>Auto Body Frame Alignment</td>
<td>129</td>
</tr>
<tr>
<td>A-AUT 79B</td>
<td>Auto Body Metal Working</td>
<td>129</td>
</tr>
<tr>
<td>A-AUT 80A</td>
<td>Frame Straightening Fundamentals</td>
<td>129</td>
</tr>
<tr>
<td>A-AUT 80B</td>
<td>Advanced Frame Straightening</td>
<td>129</td>
</tr>
<tr>
<td>A-AUT 81A</td>
<td>Advanced Auto Body Repair</td>
<td>129</td>
</tr>
<tr>
<td>A-AUT 81B</td>
<td>Auto Body Painting</td>
<td>129</td>
</tr>
</tbody>
</table>
A J 21 Criminal Justice in Society  Units 3
Prerequisites: None.
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: Reading level II.
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: Reading level II.
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: Reading level II.
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: Reading level II.
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 emergencies, crime prevention and community policy concepts are introduced. (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 introduce the student to the organization, function, and jurisdiction of juvenile justice agencies; the processing and detention of juveniles; juvenile case study and 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: Reading level II.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to the practical aspects of gathering, organizing, and preparing written reports for law enforcement and correctional activities on local, state, and federal levels. The course includes the techniques of communicating facts, information, and ideas effectively in a simple, clear, and logical manner for various types of criminal justice system reports, letters, memoranda, directives, and administrative reports. The student gains practical experience in note-taking, report writing, and presenting testimony in court. (CSU)

A J 32A 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 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: Reading level II.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to provide the student with an introduction to the identification of narcotics and dangerous drugs, contraband, investigation problems, laws, the impact of drug use on the community, and methods relating to the suppression and prosecution of narcotics and dangerous drug violations. (CSU)

A J 50H Special Studies: Administration Units 1-2 of Justice
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: Reading level II.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to provide an introduction to the structure and functions of probation as a judicial process and parole as an executive function. Comparisons of the correctional process concerned with the evaluation, treatment, and control of offenders are made. (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 Units 1-8 of Justice
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 71 Basic Academy: Institutions Units 33
Prerequisites: None.
Limitations on Enrollment: 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; no felony convictions or legal mandates that restrict or prohibit employment as a youth counselor or a correctional officer.
Advisories: None.
This course is designed to provide the student with the background and training needed to perform the ward supervisory duties required of youth counselors in the California Youth Authority (CYA) or correctional officers in the California Department of Corrections (CDC). The Commission on Correctional Peace Officers’ Standards and Training (CPOST) certifies this course. Upon successful completion, the student receives a San Joaquin Delta College Basic Academy Certificate of Completion.
A J 73 Basic Academy: Corrections  Units 32
Prerequisites: None.
Limitations on Enrollment: 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; no felony convictions or legal mandates that restrict or prohibit employment as a correctional officer.
Advisories: None.
This course is designed to provide the student with the background and training needed to perform the duties required of correctional officers in the California Department of Corrections (CDC). The Commission on Correctional Peace Officers’ Standards and Training (CPOST) certifies this course. Upon successful completion, the student receives a San Joaquin Delta College Basic Academy Certificate of Completion.

A J 85A Reserve Officer Beginning:  Units 3
Level III Module A
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:  Units 6
Level II Module B
Prerequisites: A J 85A, Reserve Officer Beginning.
Limitations on Enrollment: None.
Advisories: None.
This course examines 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:  Units 4
Level I Module C
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  Units 4
Penal Code-832
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:  Units 1-8
Correctional Science
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 summer 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.
Agriculture Business

**AGBUS 10  Agricultural Accounting**  
Units 3  
Prerequisites: Reading level II.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is designed to provide the student with the principles of agricultural accounting systems and records. Accounting principles relating to cash, receivables, inventories, depreciation, payroll, payables, and income tax are included. The course examines the use of enterprise budgets, cash flow budgets, and financial statements to enhance agribusiness management decision making. (UC, CSU)

**AGBUS 12  Agricultural Economics**  
Units 3  
Prerequisites: None.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is designed to examine the basic economic principles of resource allocation, production, cost analysis, and market price equilibrium with primary application to the agricultural sector. The course includes pricing and marketing of agricultural commodities, survey of agricultural credit, and policy issues. (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 14  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  Agribusiness Computer Applications**  
Units 3  
Prerequisites: None.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is a basic introduction to ag business computer applications in the workplace. Students use personal computers, software applications, including word processing, spreadsheets, databases, internet, and other software appropriate to agribusiness. (CSU, CAN AG 2)

**AGBUS 16  Agribusiness Computer Applications**  
Units 3  
Prerequisites: None.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is a basic introduction to ag business computer applications in the workplace. Students use personal computers, software applications, including word processing, spreadsheets, databases, internet, and other software appropriate to agribusiness. (CSU, CAN AG 2)

**AGBUS 46  Agricultural Marketing**  
Units 3  
Prerequisites: Reading level II.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is designed to provide a survey of marketing aspects of the agricultural industry. The course includes an overview of the structure and institutional aspects of the marketing system. Industry studies of the marketing of selected locally grown commodities are included. (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:  Units 1-8  
Agricultural Business
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 20A  Agricultural and Natural Resources Shop Skills  Units 2
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to basic agricultural and natural resources skills required in shop practices including proper selection and care of tools and equipment. Skills are developed in the area of wood working, metal working, welding, electrical, and plumbing, including the selection, use, care, and safety of tools and equipment. (CSU)

AGEGR 21  Agricultural Welding  Units 2
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to introduce the techniques used in the construction and repair of agricultural equipment. The student uses arc welders and oxy-acetylene torches for fusion welding, heating, brazing, cutting, and hardsurfacing metals. Metal Inert Gas (MIG) and Tungsten Inert Gas (TIG) welding are emphasized. (CSU)

AGEGR 30A  Introduction to Industrial and Commercial Engines  Units 5
Prerequisites: Reading level II.
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, industrial, recreational, marine, motorcycle, and lawn and garden engines. (CSU)

AGEGR 30B  Industrial and Commercial Engines  Units 5
Prerequisites: Reading level II.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to prepare the student to analyze, troubleshoot, repair, and overhaul both two-cycle and four-cycle engines and their industrial applications. (CSU)

AGEGR 30C  Industrial Equipment: Electrical and Electronic Systems  Units 5
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to instruct the student to analyze and repair electrical problems found on industrial and commercial engines and equipment. (CSU)

AGEGR 30D  Industrial Equipment: Power Trains  Units 5
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to introduce specialized applications, drive trains, clutches, transmissions, and final drives. The student also writes work orders, develops parts lists, and works with customers. (CSU)

AGEGR 33  Equipment Maintenance and Operation  Units 2
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to introduce the safe operation and use of wheel tractors, crawlers, skid loaders, front end loaders, backhoes, and forklifts. Preventive maintenance, adjustments, minor repairs, and servicing of equipment are emphasized. (CSU, CAN AG 4)

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: Reading level II.
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)
**SECTION IV,— Description of Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Prerequisites</th>
<th>Limitations on Enrollment</th>
<th>Advisories</th>
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<tr>
<td>AGEGR 65</td>
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<td>None</td>
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<tr>
<td>AGEGR 66</td>
<td>Compact Diesel Engines</td>
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<tr>
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<td>AGEGR 75</td>
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<td>AGEGR 87A</td>
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<td>AGEGR 30D</td>
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<td>AH SC 10L</td>
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<td>AH SC 11A</td>
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**Animal Husbandry Sciences**

<table>
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<tr>
<td>AH SC 11A</td>
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**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 25A Introduction to Livestock Presentation Units 2
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to introduce 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 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 28 Basic Horse Husbandry Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to provide an introduction to the horse industry in the United States. The student studies types, breeds, selection, care, and management of the light horse. (UC, CSU, CAN AG 26)

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 the anatomy and physiology of farm animal reproduction and the basic principles of genetics and their application to livestock production. Gestation, parturition, lactation, artificial insemination, embryo transfer, inheritance, breeding systems, production testing, and selection for breeding are included. (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.
Limitations 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.
SECTION IV,— Description of Courses

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 toward supplementing man’s 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)

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 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)

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 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. (CSU)

ARCH 8 Materials of Construction Units 3
Prerequisites: Reading level II or 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 13 or ARCH 1, with a grade of “C” or better, or concurrent enrollment in E TECH 13 or 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 student to work in fields of individualized interest. (CSU)

ARCH 69V Internship: Architecture Units 1-8
Prerequisites: None.
Prerequisite Skills: Ability to assess personal interests, values, and skills. Ability to research careers, and to make decisions relative to career planning and goal setting. Ability to conduct a job search, write a resume, and interview for employment.
Limitations on Enrollment: The student must enroll in a course that is directly related to the architecture internship. The student must enroll in a minimum of 7 units, including internship units during the semester. For summer session, the student must enroll in one related course in addition to internship. The combined total numbers 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 20, 31, 32, 33.
This course is designed for the student participating in an occupational internship in architecture. Application of discipline-related skills and knowledge of the 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. To register, complete an application form available at the Applied Science and Technology Division office, Holt 140. (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 Units 2 Specialization
Prerequisites: ARCH 2.
Limitations 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: Reading level II.
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 2)

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 2)
ART 2  Art History  Units 3  
Prerequisites: Reading level II.  
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: Reading level II.  
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, CAN ART 14)

ART 7A  Beginning Painting  Units 3  
Prerequisites: Reading level II.  
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 and Reading Level I.  
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 and Reading Level II.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is a study and rendering of painted forms for effective communications. The course emphasizes refinement and its application to solving specialized assignments 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 drawing for effective communications at a beginning level. 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 36A  Intermediate Painting Units 1.5
Prerequisites: ART 36A with a grade of “C” or better.
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)

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 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)

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: ART 40A.
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 and individual expression are practiced with attention to a wide range of usage. (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 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 43D Intermediate Drawing
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
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed as a study in the 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 handbuilding are practiced with attention to a wide range of usage. Throwing on the potter's wheel is introduced but the emphasis of the course is on handbuilding. Art 44A-B (Introductory Ceramics) is equivalent to ART 64A (Introductory Ceramics). (UC, CSU, CAN ART 6 with both ART 44A and 44B)

ART 44B Introductory Ceramics
Prerequisites: ART 44A.
Limitations on Enrollment: None.
Advisories: None.
This course is designed as a study in the use of clay form for effective communication. The course concentrates on the analysis and understanding of traditional ceramic styles and their modern variations. Techniques of the potter's wheel is emphasized with attention to a wide range of usage. Art 44A-B (Introductory Ceramics) is the equivalent to ART 64A (Introductory Ceramics). (UC, CSU, CAN ART 6 with both ART 44A and 44B)

ART 44C Beginning Ceramics
Prerequisites: ART 44B.
Limitations on Enrollment: None.
Advisories: None.
This course is designed as a study in the use of clay forms for effective communication. The course concentrates on the analysis and understanding of traditional ceramic styles and their modern variations. This course emphasizes the refinement and application of wheel techniques for the solution of more complex design problems. The theory of glaze development is introduced. ART 44C-D (Beginning Ceramics) is equivalent to ART 64B (Beginning Ceramics). (UC, CSU)

ART 44D Beginning Ceramics
Prerequisites: ART 44C.
Limitations on Enrollment: None.
Advisories: None.
This course is designed as a study in the use of clay forms for effective communication. The course emphasizes the refinement and application of wheel techniques for the solution of more complex design problems. The practice of glaze development is introduced. ART 44C-D (Beginning Ceramics) is equivalent to ART 64B (Beginning Ceramics). (UC, CSU)

ART 45A Intermediate Ceramics
Prerequisites: ART 44D with a grade of “C” or better.
Limitations on Enrollment: None.
Advisories: None.
This course is the study and use of clay forms for effective communication. The course emphasizes the development of individual style and its application to solving specialized assignments related to professional goals. Kiln building theory is introduced. ART 45A-B (Intermediate Ceramics) is the equivalent of ART 65A (Intermediate Ceramics). (UC, CSU)

ART 45B Intermediate Ceramics
Prerequisites: ART 45A with a grade of “C” or better.
Limitations on Enrollment: None.
Advisories: None.
This course is the study and use of clay forms for effective communication. The course emphasizes the development of individual style and its application to solving specialized assignments related to professional goals. Kiln building theory is continued. ART 45A-B (Intermediate Ceramics) is the equivalent of ART 65A (Intermediate Ceramics). (UC, CSU)

ART 45C Advanced Ceramics
Prerequisites: ART 45B with a grade of “C” or better.
Limitations on Enrollment: None.
Advisories: None.
This course is the study and use of clay forms for effective communication. The course continues to emphasize the development of individual style and its application to solving specialized assignments related to professional goals. Kiln firing is introduced. ART 45C-D (Advanced Ceramics) is equivalent to ART 65B (Advanced Ceramics). (UC, CSU)

ART 45D Advanced Ceramics
Prerequisites: ART 45C with a grade of “C” or better.
Limitations on Enrollment: None.
Advisories: None.
This course is the study and use of clay forms for effective communication. The course continues to emphasize the development of individual style and its application to solving specialized assignments related to professional goals. Kiln firing is continued. ART 45C-D (Advanced Ceramics) is equivalent to ART 65B (Advanced Ceramics). (UC, CSU)

ART 46A Introductory Sculpture
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is a study and use of material forms for effective communications. The course emphasizes the development 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
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 designed as a study in the use of clay forms for effective communication. The course emphasizes the refinement and application of wheel techniques for the solution of more complex design problems. The theory of kiln firing and the practice of glaze development is introduced. (UC, CSU)

ART 65A  Intermediate Ceramics  Units 3  
Prerequisites: ART 64B.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is designed as a study and use of clay for effective communication. This course emphasizes the development of individual style and its application to solving specialized assignments related to professional goals. Kiln building theory is introduced. (UC, CSU)

ART 65B  Advanced Ceramics  Units 3  
Prerequisites: ART 65A.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is designed as a study and use of clay for effective communication. This course emphasizes the development of individual style and its application to solving specialized assignments related to professional goals. Kiln firing and management are introduced. (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 Introduction to Astronomy
Units: 3
Prerequisites: Reading level II and Math Level II; MATH 80 or 83B each with a grade of "C" or better.
Limitations on Enrollment: None.
Advisories: None.
This course is designed as a non-mathematical, descriptive course in general astronomy dealing with the nature and evolution of the solar system, 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.
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)
### Description of Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>ATH 61</td>
<td>Soccer Team: Women</td>
<td>2</td>
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<tr>
<td></td>
<td>Prerequisites: None.</td>
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<td></td>
<td>Limitations on Enrollment: None.</td>
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<td></td>
<td>Advisories: None.</td>
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<tr>
<td>ATH 62</td>
<td>Volleyball Team: Women</td>
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<td></td>
<td>Prerequisites: None.</td>
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<td></td>
<td>Limitations on Enrollment: None.</td>
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<td></td>
<td>Advisories: None.</td>
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<tr>
<td>ATH 63</td>
<td>Swimming and Diving Team: Women</td>
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<td></td>
<td>Prerequisites: None.</td>
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<td></td>
<td>Limitations on Enrollment: None.</td>
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<tr>
<td>ATH 64</td>
<td>Basketball Team: Women</td>
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<td>Prerequisites: None.</td>
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<td>Limitations on Enrollment: None.</td>
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<tr>
<td>ATH 65</td>
<td>Softball Team: Women</td>
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<td>Prerequisites: None.</td>
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<td>Limitations on Enrollment: None.</td>
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<td>Advisories: None.</td>
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<tr>
<td>ATH 66</td>
<td>Tennis Team: Women</td>
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<td>Prerequisites: None.</td>
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<td>Limitations on Enrollment: None.</td>
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<tr>
<td>ATH 67</td>
<td>Water Polo Team: Women</td>
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<td>Prerequisites: None.</td>
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<td>Limitations on Enrollment: None.</td>
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<td>Advisories: None.</td>
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<td></td>
<td>This course is part of the intercollegiate athletic program of Delta College. Delta College participates in the Bay Valley Conference. (CSU)</td>
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<tr>
<td>ATH 68</td>
<td>Track Team: Women</td>
<td>2</td>
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<tr>
<td></td>
<td>Prerequisites: None.</td>
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<td></td>
<td>Limitations on Enrollment: None.</td>
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<td></td>
<td>Advisories: None.</td>
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<tr>
<td></td>
<td>This course is part of the intercollegiate athletic program of Delta College. Delta College participates in the Bay Valley Conference. (UC, CSU)</td>
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<tr>
<td>ATH 69</td>
<td>Cross Country Team: Women</td>
<td>2</td>
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<td></td>
<td>Prerequisites: None.</td>
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<td></td>
<td>Limitations on Enrollment: None.</td>
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<td></td>
<td>Advisories: None.</td>
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<tr>
<td></td>
<td>This course is part of the intercollegiate athletic program of Delta College. Delta College participates in the Bay Valley Conference. (UC, CSU)</td>
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</tbody>
</table>

### Automotive Technology

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTO 50</td>
<td>Automatic Transmissions and Transaxles</td>
<td>6</td>
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<tr>
<td></td>
<td>Prerequisites: None.</td>
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<td></td>
<td>Limitations on Enrollment: None.</td>
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<tr>
<td></td>
<td>Advisories: AUTO 62.</td>
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<tr>
<td></td>
<td>This course is designed to prepare the student to analyze, adjust, service, and repair automatic transmissions and transaxles on foreign and domestic automobiles. (CSU)</td>
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<tr>
<td>AUTO 51</td>
<td>Manual Drivetrain and Axles</td>
<td>5</td>
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<tr>
<td></td>
<td>Prerequisites: None.</td>
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<td></td>
<td>Limitations on Enrollment: None.</td>
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<tr>
<td></td>
<td>Advisories: AUTO 62.</td>
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<tr>
<td></td>
<td>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)</td>
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<tr>
<td>AUTO 52</td>
<td>Engine Rebuilding</td>
<td>6</td>
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<tr>
<td></td>
<td>Prerequisites: None.</td>
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<td></td>
<td>Limitations on Enrollment: None.</td>
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<td></td>
<td>Advisories: AUTO 64.</td>
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<tr>
<td></td>
<td>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)</td>
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<tr>
<td>AUTO 53</td>
<td>Brakes, Suspension, and Steering</td>
<td>7</td>
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<tr>
<td></td>
<td>Prerequisites: None.</td>
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<tr>
<td></td>
<td>Limitations on Enrollment: None.</td>
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<tr>
<td></td>
<td>Advisories: AUTO 62.</td>
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<tr>
<td></td>
<td>This course is designed to prepare the student to analyze, adjust, service, and repair automotive brakes, suspension, and steering systems. (CSU)</td>
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<tr>
<td>AUTO 54</td>
<td>Starting, Charging, and Electrical Systems</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Prerequisites: AUTO 63 or DIESL 49 either with a grade of “C” or better and concurrent enrollment in AUTO 63.</td>
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<tr>
<td></td>
<td>Limitations on Enrollment: None.</td>
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<tr>
<td></td>
<td>Advisories: None.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course is designed to prepare the student to effectively diagnose and repair automotive starting, charging, and electrical systems. (CSU)</td>
<td></td>
</tr>
</tbody>
</table>
AUTO 55  Ignition Systems and Electronic Engine Controls  Units 6
Prerequisites: AUTO 63 with a grade of “C” or better. Corequisite: Concurrent enrollment in 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 6
Prerequisites: AUTO 63 with a grade of “C” or better and concurrent enrollment in 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 6
Prerequisites: AUTO 63 with a grade of “C” or better.
Corequisites: Concurrent enrollment in AUTO 63.
Limitations on Enrollment: None.
Advisories: None.
The 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: Reading level II.
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 55  Ignition Systems and Electronic Engine Controls  Units 6
Prerequisites: AUTO 63 with a grade of “C” or better. Corequisite: Concurrent enrollment in AUTO 63.
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 56  Fuel Management and Computer Controls  Units 6
Prerequisites: AUTO 63 with a grade of “C” or better and concurrent enrollment in AUTO 63.
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 57  Air Conditioning, Heating, and Electrical Systems  Units 6
Prerequisites: AUTO 63 with a grade of “C” or better.
Corequisites: Concurrent enrollment in AUTO 63.
Limitations on Enrollment: None.
Advisories: None.
The 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: Reading level II.
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)
SECTION IV,— Description of Courses

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 Repair Laboratory Units 1
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 fivering 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.
SECTION IV.— Description of Courses

**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.

Limitations 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.

Limitations 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.

Limitations on Enrollment: This course requires instructor approval to enroll.

Advisories: None.

This course is designed for advanced students in auto body. Students complete an advanced specialized project developed in consultation with the instructor.

**AUTO 90A** Introduction to Closed Loop Fuel Control Units 1

Prerequisites: None.

Limitations on Enrollment: AC Delco-Approved Technician.

Advisories: None.

This course is designed to provide introductory training in closed loop fuel control. The course includes the study of operations of electronic modules, sensors, and actuators. The course includes use of scan tools and diagnostic procedures using digital multimeters.

**AUTO 90B** Throttle Body Injection Systems Units 0.5

Prerequisites: None.

Limitations on Enrollment: AC Delco-Approved Technician.

Advisories: None.

This course is designed to provide in-depth training in throttle body injection system diagnosis and repair. The course includes diagnosis of driveability concerns, repair of throttle body injectors, idle air control systems, throttle position sensors, pressure regulators, fuel lines, and pump systems. Fuel pressure testers, scan tools, and digital multimeters are used. Diagnostic strategies and repair procedures are included.

**AUTO 90C** Port Fuel Injection Systems Units 0.5

Prerequisites: None.

Limitations on Enrollment: AC Delco-Approved Technician.

Advisories: None.

This course is designed to provide in-depth training in multi-port fuel injection system diagnosis and repair. The course includes diagnosis of driveability concerns and repair of multi-port fuel injectors, fuel rail, idle air control systems, throttle position sensors, pressure regulators, fuel lines, and pump systems. Fuel pressure testers, scan tools, and digital multimeters are used. Diagnostic strategies and repair procedures are included.

**AUTO 90D** Enhanced Emission Test Units 1 Failure Diagnosis

Prerequisites: None.

Limitations on Enrollment: AC Delco-Approved Technician.

Advisories: None.

This course is designed to provide in-depth training in the Inspection/Maintenance (I/M) 240 testing, local requirements, and investigation-based diagnosis of I/M 240 failures. The student studies the operation and diagnostic performance testing of oxygen sensors, catalytic converters, and evaporative system integrity testing. Scan tools, digital multimeters, laboratory scopes, and five-gas analyzers are used while learning to apply diagnostic strategies and advanced repair procedures.

**AUTO 90E** On Board Diagnostics Units 1

Prerequisites: None.

Limitations on Enrollment: AC Delco-Approved Technician.

Advisories: None.

This course is designed to provide in-depth training of the On Board Diagnostics (OBD), meeting the second level of Federal requirements (OBD II). The use of scan tools and laboratory scopes to diagnose OBD II is included. Diagnostic procedures include diagnosis with and without trouble codes. The student studies the use of investigation-based technical service bulletin (TSB) searches. Catalyst monitoring misfire detection, heated oxygen sensors, freeze frame/failure records, enhanced evaporative systems operation and related topics.

**AUTO 90F** Driveability and Emission Diagnosis Units 1

Prerequisites: None.

Limitations on Enrollment: AC Delco-Approved Technician.

Advisories: None.

This course is designed to provide an understanding of fuel control and its effects on tailpipe emissions. Fuel management systems, emission systems, catalytic convertors, air injection, exhaust gas recirculation, evaporative emission control, and positive crankcase ventilation valves are included. Emissions and driveability symptoms are analyzed and strategies for repair are applied.
### AUTO 90I Air Conditioning Systems Units 1 and Service
**Prerequisites:** None.
**Limitations on Enrollment:** AC Delco-Approved Technician.
**Advisories:** None.
This course is designed to provide an understanding of air conditioning systems theory of operation, configuration, diagnosis, service, and repair. Topics include performance and leak testing of systems, checking for contamination and proper refrigerant disposal, recovery and charging, lubrication, and basic manual mode and blower control.

### AUTO 90J Air Conditioning Controls Units 0.5
**Prerequisites:** None.
**Limitations on Enrollment:** AC Delco-Approved Technician.
**Advisories:** None.
This course is designed to provide an in-depth study of air distribution and heating, ventilation, and air conditioning controls. Topics include compressor clutch control, engine cooling system, air distribution, manual and automatic climate control systems, rear heater and air conditioning controls, operator interface, and strategy based diagnostics. Systems are analyzed and strategies applied for effective repair procedures.

### AUTO 90L Automotive Electrical Circuits and Digital Meters
**Prerequisites:** None.
**Limitations on Enrollment:** AC Delco-Approved Technician.
**Advisories:** None.
This course is designed to provide pertinent information and a basic understanding of electricity and meters. Topics include basic electricity, fundamentals of electrical circuits, and operation of the Fluke 87 digital volt ohmmeter. Application of Ohm’s Law to basic series and parallel circuits, digital meter functions to read circuit resistance, amperage flow, resistance in common automotive circuits, and parasitic draw are calculated and measured.

### AUTO 90M Automotive Electronics Units 1.5
**Prerequisites:** None.
**Limitations on Enrollment:** AC Delco-Approved Technician.
**Advisories:** None.
This course is designed to provide a study of automotive electricity and electronics. The course begins with review of the basics of electricity and continues with the concept of power. Topics also include capacitance and time delay devices, electromagnetism and current induction in various automotive coils and motor applications. Circuits are assembled and analyzed using a digital volt ohmmeter.

### AUTO 90N Automotive Electronics Units 1.5
**Prerequisites:** None.
**Limitations on Enrollment:** AC Delco-Approved Technician.
**Advisories:** None.
This course is designed to provide further study of automotive electrical and electronic systems. The course begins with a review of the basics of electricity and study continues with the concept of electrical power. Typical automotive electronic circuits are assembled using various semi conductive devices, and analyzed using digital volt ohmmeters. Generators (alternators) are studied to determine the use and characteristics of semi conductors and electronic circuitry.

### AUTO 90P Electronic Ignition Units 1
**Prerequisites:** None.
**Limitations on Enrollment:** AC Delco-Approved Technician.
**Advisories:** None.
This course is designed to provide an understanding of the basic electronic ignition system from the initial design to the computerized direct ignition systems utilized today. Systems and components include High Energy Ignition system, ignition control, primary circuit, secondary circuit, position sensors, knock sensors, and circuit operation. Diagnostic procedures for common failures are identified.

### AUTO 90Q Starting and Charging Systems Units 1
**Prerequisites:** None.
**Limitations on Enrollment:** AC Delco-Approved Technician.
**Advisories:** None.
This course is designed to provide a basic understanding of charging and starting systems. The course focuses on basic electricity, batteries, operation and diagnosis of generators, and cranking systems. Diagnostic tests such as parasitic draw, phantom drain, load testing, charging output, and system diagnostic testing are included.

### AUTO 90R Heavy Duty Electrical Diagnosis Units 1
**Prerequisites:** None.
**Limitations on Enrollment:** AC Delco-Approved Technician.
**Advisories:** None.
This course is designed to provide an understanding of heavy-duty electrical systems. Topics covered are batteries, starting systems, and generator systems. Basic electrical skills, meter reading, battery testing, starting system testing, charging system testing, and circuit wiring diagnosis are applied.

### AUTO 90U Four-Wheel Antilock Brakes Units 1
**Prerequisites:** None.
**Limitations on Enrollment:** AC Delco-Approved Technician.
**Advisories:** None.
This course is designed to provide an understanding of four-wheel antilock brake system theory of operation, configuration, diagnosis, service, and repair. Topics include antilock brake system basics, components, operation, and diagnosis of basic systems. Electronic diagnostic procedures and the required equipment are included.

### AUTO 90V Rear Wheel Antilock Brakes Units 1
**Prerequisites:** None.
**Limitations on Enrollment:** AC Delco-Approved Technician.
**Advisories:** None.
This course is designed to provide an understanding of rear wheel antilock brake theory of operation, configuration, diagnosis, service, and repair. Topics include rear wheel antilock brake system basics, components, operation, diagnosis of basic systems. Diagnostic procedures and the required equipment are included.

### AUTO 90W Teves Mark II Antilock Brake System
**Prerequisites:** None.
**Limitations on Enrollment:** AC Delco-Approved Technician.
**Advisories:** None.
This course is designed to provide an understanding of Teves Mark II antilock brake system theory of operation, configuration, diagnosis, service, and repair. Topics include antilock brake system basics, components, operation, and diagnosis of basic systems. Diagnostic procedures and the required equipment to diagnose the Teves Mark II system are included.
SECTION IV,— Description of Courses

AUTO 90X Teves Mark IV Antilock Units 1 Brake System
Prerequisites: None.
Limitations on Enrollment: AC Delco-Approved Technician.
Advisories: None.
This course is designed to provide an understanding of Teves Mark IV antilock brake system theory, configuration, diagnosis, service, and repair. Topics include antilock brake system basics, components, operation, and diagnosis of basic systems. Diagnostic procedures and the required equipment to diagnose the Teves Mark IV system are included.

AUTO 90Y Bosch 2U and Bosch 5 Antilock Units 1 Brake System
Prerequisites: None.
Limitations on Enrollment: AC Delco-Approved Technician.
Advisories: None.
This course is designed to provide an understanding of Bosch 2U and Bosch 5 antilock brake systems theories of operation, configuration, diagnosis, service, and repair. Topics include antilock brake system basics, components, operation, and diagnosis of basic systems. Diagnostic procedures and the required equipment to diagnose the Bosch 2U and Bosch 5 systems are included.

AUTO 90Z Delphi Chassis Antilock Units 1 Brake System
Prerequisites: None.
Limitations on Enrollment: AC Delco-Approved Technician.
Advisories: None.
This course is designed to provide an understanding of Delphi Chassis VI antilock brake theory of operation, configuration, diagnosis, service, and repair. Topics include antilock brake system basics, components, operation, and diagnosis of basic systems. Diagnostic procedures and the required equipment to diagnose the Delphi Chassis system are included.

A-AUT 50 Automatic Transmissions Units 5 and Transaxles
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: None.
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: Indentured Apprentice.
Advisories: None.
This course is designed to prepare the student to diagnose and repair automotive engine performance problems and driveability malfunction-related failures. (CSU)

A-AUT 56 Fuel Management and Computer Controls Units 5
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
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. (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 systems, 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.

A-AUT 81B Auto Body Painting Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to emphasize paint spraying; rubbing and polishing techniques; custom painting tools, materials, and equipment; electromechanical components; apprenticeship programs; and auto body business practices.