

APPRENTICESHIP

(APPR)

Courses in related and supplemental instruction are offered for apprentice indentured under the California Apprenticeship Law.

APPR 401A

Auto Body Repair

2.5 units, 1.5 hours lecture, 3 hours laboratory (GR)

Non-degree applicable

Principles and techniques of auto body repair: Introductory principles, hand and power tool usage, safety, oxyacetylene welding. 0949.01

APPR 401B

Auto Body Repair

2.5 units, 1.5 hours lecture, 3 hours laboratory (GR)

Non-degree applicable

Principles and techniques of auto body repair: MIG welding, safety, proper uses theory; roughing, shaping, shrinking sheetmetal (metallurgy). 0949.01

APPR 401C

Auto Body Repair

2.5 units, 1.5 hours lecture, 3 hours laboratory (GR)

Non-degree applicable

Principles and techniques of auto body repair: Plastic fillers, plastics, fiberglass, urethane substrates. 0949.01

APPR 401D

Auto Body Repair

2.5 units, 1.5 hours lecture, 3 hours laboratory (GR)

Non-degree applicable

Principles and techniques of auto body repair: Automotive glass and its installation, removal and adjustment; water leaks, wind noise. 0949.01

APPR 401E

Auto Body Repair

2.5 units, 1.5 hours lecture, 3 hours laboratory (GR)

Non-degree applicable

Principles and techniques of auto body repair: Automotive construction types (unibody, conventional frame, subframe). 0949.01

APPR 401F

Auto Body Repair

2.5 units, 1.5 hours lecture, 3 hours laboratory (GR)

Non-degree applicable

Principles and techniques of auto body repair: Gauging and analyzing frame damage. 0949.01

APPR 401G

Auto Body Repair

2.5 units, 1.5 hours lecture, 3 hours laboratory (GR)

Non-degree applicable

Principles and techniques of auto body repair: Frame straightening and equipment methods. 0949.01

APPR 401H

Auto Body Repair

2.5 units, 1.5 hours lecture, 3 hours laboratory (GR)

Non-degree applicable

Principles and techniques of auto body repair: Estimating damages and repair costs. 0949.01

APPR 405A

Auto Painting

2.5 units, 1.5 hours lecture, 3 hours laboratory (GR)

Non-degree applicable

Principles and techniques of auto painting: Safety and health. 0949.02

APPR 405B

Auto Painting

2.5 units, 1.5 hours lecture, 3 hours laboratory (GR)

Non-degree applicable

Principles and techniques of auto painting: Paint equipment. 0949.02

APPR 405C

Auto Painting

2.5 units, 1.5 hours lecture, 3 hours laboratory (GR)

Non-degree applicable

Principles and techniques of auto painting: Paint preparation. 0949.02

APPR 405D

Auto Painting

2.5 units, 1.5 hours lecture, 3 hours laboratory (GR)

Non-degree applicable

Principles and techniques of auto painting: Detailing. 0949.02

APPR 405E

Auto Painting

2.5 units, 1.5 hours lecture, 3 hours laboratory (GR)

Non-degree applicable

Principles and techniques of auto painting: Color application. 0949.02

APPR 405F**Auto Painting**

2.5 units, 1.5 hours lecture, 3 hours laboratory (GR)
 Non-degree applicable
 Principles and techniques of auto painting: Paint failures.
 0949.02

APPR 405G**Auto Painting**

2.5 units, 1.5 hours lecture, 3 hours laboratory (GR)
 Non-degree applicable
 Principles and techniques of auto painting: Painting of
 flexible parts. 0949.02

APPR 405H**Auto Painting**

2.5 units, 1.5 hours lecture, 3 hours laboratory (GR)
 Non-degree applicable
 Principles and techniques of auto painting: BAAQMD
 regulations for auto painting. 0949.02

APPR 451**Truck Mechanics Chassis System I**

6 units, 6 hours lecture (GR)
 Also offered as Dmech 11. Not open for credit to students
 who have completed or are currently enrolled in Dmech
 11.
 Eligible for credit by examination
 Non-degree applicable
 Operation, service, maintenance, and problem solving
 of heavy-duty truck chassis systems: Clutches,
 transmission, rear axles, and front-end alignment; uses
 Internet- and factory-based computerized research
 materials. 0947.01

APPR 452**Truck Mechanics Chassis Systems II**

6 units, 6 hours lecture (GR)
 Also offered as Dmech 12. Not open for credit to students
 who have completed or are currently enrolled in Dmech
 12.
 Eligible for credit by examination
 Non-degree applicable
 Operation, service, and maintenance of heavy-duty
 truck brake and electrical systems: Emphasis on critical
 thinking and problem solving of the air brake and
 electrical systems, including computer diagnostics and
 computer on-board networking programs. 0947.01

APPR 453**Diesel Engines I**

4 units, 4 hours lecture (GR)
 Also offered as Dmech 14. Not open for credit to students
 who have completed or are currently enrolled in Dmech
 14.
 Eligible for credit by examination
 Non-degree applicable
 Theory and operation of truck diesel engines and
 related sub-systems: Newest available technology on the
 commercial market. 0947.01

APPR 454**Diesel Engines II**

4 units, 4 hours lecture (GR)
 Also offered as Dmech 15. Not open for credit to students
 who have completed or are currently enrolled in Dmech
 15.
 Eligible for credit by examination
 Non-degree applicable
 Advanced theory and operation of truck diesel engines
 and related sub-systems: Newest available technology
 on the commercial market. 0947.01

APPR 471**Introduction to Auto Mechanics**

4 units, 3 hours lecture, 3 hours laboratory (GR)
 Also offered as Atech 22. Not open for credit to students
 who have completed or are currently enrolled in Atech
 22.
 Eligible for credit by examination
 Non-degree applicable
 How cars work: Construction and operation of engines,
 engine support systems, drivetrains and chassis; vehicle
 maintenance services; shop procedures including safety,
 proper use of tools, equipment and shop manuals; how
 to write repair orders. 0948.01

APPR 472**Introduction to Automotive Electrical Systems**

4 units, 3 hours lecture, 3 hours laboratory (GR)
 Recommended preparation: Math 225 and Bus 208
 Also offered as Atech 26. Not open for credit to students
 who have completed or are currently enrolled in Atech
 26.
 Non-degree applicable
 Introduction to automotive electrical systems: Electrical
 theory, chassis wiring, batteries, cranking, charging, and
 ignition systems; special emphasis placed on diagnosis
 and repair of vehicle chassis wiring. 0948.01

APPR 473A**Computer Controls and Fuel Injection**

4 units, 3 hours lecture, 3 hours laboratory (GR)

Prerequisite: Appr 482 or Atech 11

Also offered as Atech 24A. Not open for credit to students who have completed or are currently enrolled in Atech 24A.

Eligible for credit by examination

Non-degree applicable

Automotive computer-control and fuel-injection systems: Service and repair of computer-control and fuel-injection systems by all manufacturers, with emphasis on "hands-on" electronic testing and diagnostic procedures of ignition, fuel, emission-control, and generic electronic fuel-injection systems. 0948.01

APPR 482**Introduction to Electronic Engine Controls**

4 units: 3 hours lecture, 3 hours laboratory (GR)

Not open for credit to students who have completed Atech 232.

Eligible for credit by examination

Non-degree applicable

Course includes 60 hours of the required 120-hour training program necessary to take the California State I/M license examination. Also see Appr 483. Introduction to the principles and operations of major computerized electronic engine-control systems: Ignition, emission, and computer carburetor controls, and fuel-injection systems preparation for the California State I/M license examination. 0948.01

APPR 483**Emission Control Systems**

4 units, 3 hours lecture, 3 hours laboratory (GR)

Not open for credit to students who have completed Atech 233.

Non-degree applicable

Course includes 60 hours of the required 120-hour training program necessary to take the California State I/M license examination. Also see Appr 482. Familiarization with the California State Smog Check program: Rules, regulations, vehicle testing, and operations necessary to certify vehicles under the program; preparation for the California State I/M license examination. 0948.01

APPR 484**Introduction to Brakes, Alignment and Headlamp Aiming**

4 units, 3 hours lecture, 3 hours laboratory (GR)

Also offered as Atech 234. Not open for credit to students who have completed or are currently enrolled in Atech 234.

Eligible for credit by examination

Non-degree applicable

Introduction to brake, alignment, and headlamp aiming systems: Operation, maintenance, troubleshooting, and adjustment of steering, suspension, braking, and headlamp aiming systems; emphasis on proper use of manuals and safe use of tools and equipment; preparation for the California State Brake and Lamp licensing exams. 0948.01

APPR 485**Advanced Emissions Diagnostics: Smog Check II**

2 units, 1.5 hours lecture, 1.5 hours laboratory (GR)

Prerequisite: Atech 24A

Also offered as Atech 27. Not open for credit to students who have completed or are currently enrolled in Atech 27.

Non-degree applicable

Five-gas analysis using BAR 97: Advanced emissions diagnostics and related topics. 0948.01

APPR 486**Automotive Air Conditioning**

4 units, 3 hours lecture, 3 hours laboratory (GR)

Recommended preparation: Atech 21 and 22 and Math 225 and Bus 208

Also offered as Atech 23. Not open for credit to students who have completed or are currently enrolled in Atech 23.

Non-degree applicable

Study of automotive air conditioning systems: Principles and systems necessary for the installation, design, function, and repair of air conditioning units; maintenance, troubleshooting procedures, proper use of air conditioning charging station and recovery/recycle equipment; emphasis on proper use of manuals and safe use of tools and equipment. 0948.01