

CUYAMACA COLLEGE
COURSE OUTLINE OF RECORD

Automotive Technology 285 – Level II Inspector Training Emission Control License

1 hour lecture, 1 unit

Catalog Description

This lecture class of smog check procedures training must be completed by all Inspector candidates. This training provides students the procedural knowledge skills and abilities to describe and identify emission inspection procedures. This lecture course is part of a three course series: 285 lecture is accompanied by 285 Lab, and 285 Assessment Test Out, required prior to taking the Bureau of Automotive Repair (BAR) Smog Inspector state licensing examination. To pass level II training students must pass a series of hands-on assessments and a written examination. This course is designed for experienced students who possess ASE A6, A8, and L1 certification; or possess an AA/AS degree or Certificate(s) in automotive technology and have 1 year experience; or have 2 years of experience and have completed BAR specified diagnostic and repair training.

Prerequisite

None

Course Content

- 1) Lecture
 - a. Introduction to safety and best practices regarding vehicle safety and vehicle pollutants
 - b. Introduction to consumer law as prescribed in “Laws and Regulations” of “Repair Dealers” and Technicians
 - c. Authorization of repairs and services using consumer law “Write it Right”
 - d. How to perform various inspections using various test equipment as prescribed by B.A.R.
- 2) Online Learning Modules
 - a. Students will complete a series of online learning modules
- 3) Demonstrations
 - a. Perform functional tests of various emission control systems using test equipment
 - b. Identify missing, modified, or disconnected emission control devices and systems
 - c. Identify incorrect engine application and engine changes
 - d. Perform exhaust gas recirculation tests
 - e. Perform functional timing tests
 - f. Use the On Board Diagnostic system to describe monitors that are complete and incomplete
 - g. Calibrate equipment used for performing tests and inspections

Course Objectives

Students will be able to:

- 1) Describe and demonstrate personal, shop, equipment, and vehicle safety practices.
- 2) Describe laws, regulations, and procedures associated with consumer authorization of inspections and the overall administration of a Smog Check Program.
- 3) Describe the standards and practices of Smog Check Inspectors.
- 4) Demonstrate the ability to calibrate an emission inspection system.
- 5) Demonstrate knowledge, skills, and abilities in performing emission system tests on various vehicle designs.

Method of Evaluation

A grading system will be established by the instructor and implemented uniformly. Grades will be based on demonstrated proficiency in the subject matter determined by multiple measurements for evaluation, one of which must be essay exams, skills demonstration, or, where appropriate, the symbol system.

- 1) Quizzes, written exams, and hands-on performance exams measuring student abilities to safely identify necessary actions or needed repairs, and knowledge of consumer rights and responsibilities.
- 2) Practical lab exercises that measure student progress toward mastering tasks related to testing and identifying emission related systems and components.
- 3) Skills based summative assessment that measures student ability to successfully complete the necessary tasks related to testing of emission systems and components.

Special Materials Required of Student

- 1) Approved safety glasses
- 2) High speed internet connection
- 3) Students will have access to testing tools and equipment while on campus
- 4) Safety dress code is required while in the lab on campus

Minimal Instructional Facilities

- 1) Smart Classroom
- 2) Required training materials
- 3) College learning management system
- 4) Laboratory with training vehicles
- 5) (D.A.D) vehicle data acquisition devices and other equipment prescribed by B.A.R.

Method of Instruction

- 1) Lecture and demonstration of systems related to student learning outcomes
- 2) Individual assistance during laboratory assignments and web-based tutoring using distance learning tools
- 3) Online learning modules with formative learning exercises
- 4) Open laboratories where students perform objective tests and laboratory assignments

Out of Class Assignments

- 1) **Reading:** assigned course materials, manuals, content on websites, and more.
- 2) **Writing:** assignments where students describe the required tasks related to identifying, testing, and needed repairs of emission systems and components, and more.
- 3) **Other:** web-based training modules (pass online pretests prior to laboratory "Test Out"), portfolio performance projects related to identifying, testing, and needed repairs of emission systems and components, and more.

Texts and References

- 1) Required (representative examples):
 - a. Student workbooks – will be provided electronically.
 - b. Required: VanGelder, Kirk. Fundamentals of Automotive Technology. Jones and Bartlett Learning, 2023.
 - c. Web Based Training Modules will be provided electronically.
 - d. Workshop Manuals will be provided electronically.
- 2) Supplemental: None

Student Learning Outcomes

Upon successful completion of this course, students will be able to:

- 1) Accurately describe the compliance and test procedures of various emission components and systems.

- 2) Identify and describe emission systems by navigating multiple sources of industry standard manuals, special service messages, technical service bulletins, and BAR publications and websites for vehicle inspections.
- 3) Communicate effectively and professionally in a diverse setting that includes prospective colleagues, clients, and supervisors.
- 4) Comply with environmental health and safety regulations at the state and federal levels.