

**AUTO 108 Course Outline as of Fall 2016****CATALOG INFORMATION**

Dept and Nbr: AUTO 108 Title: CLEAN AIR CAR COURSE

Full Title: Clean Air Car Course: BAR Levels 1 &amp; 2

Last Reviewed: 9/21/2015

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	5.00	Lecture Scheduled	5.00	17.5	Lecture Scheduled	87.50
Minimum	5.00	Lab Scheduled	1.00	6	Lab Scheduled	17.50
		Contact DHR	0		Contact DHR	0
		Contact Total	6.00		Contact Total	105.00
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 175.00

Total Student Learning Hours: 280.00

Title 5 Category: AA Degree Applicable

Grading: Grade or P/NP

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly: AUTO 399.5

**Catalog Description:**

This course is designed for automotive professionals who wish to obtain or renew a State of California BAR (Bureau of Automotive Repair) smog license. This is a BAR approved training class, which includes both Level 1 and Level 2 training. This BAR training meets part of the qualifications needed to take the Smog Technician licensing examination. A minimum of nine units completed in Auto Electric and Engine Performance education OR one year of verifiable trade experience in auto electrical, engine performance and emission control diagnosis & repair, is strongly recommended in order to be successful in this course.

**Prerequisites/Corequisites:****Recommended Preparation:**

Course completion or Concurrent Enrollment in Auto 156 and Auto 153

**Limits on Enrollment:****Schedule of Classes Information:**

Description: This course is designed for automotive professionals who wish to obtain or renew a State of California BAR (Bureau of Automotive Repair) smog license. This is a BAR approved

training class, which includes both Level 1 and Level 2 training. This BAR training meets part of the qualifications needed to take the Smog Technician licensing examination. A minimum of nine units completed in Auto Electric and Engine Performance education OR one year of verifiable trade experience in auto electrical, engine performance and emission control diagnosis & repair, is strongly recommended in order to be successful in this course. (Grade or P/NP)

Prerequisites/Corequisites:

Recommended: Course completion or Concurrent Enrollment in Auto 156 and Auto 153

Limits on Enrollment:

Transfer Credit:

Repeatability: Two Repeats if Grade was D, F, NC, or NP

## **ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:**

<b>AS Degree:</b>	<b>Area</b>	Effective:	Inactive:
<b>CSU GE:</b>	<b>Transfer Area</b>	Effective:	Inactive:

<b>IGETC:</b>	<b>Transfer Area</b>	Effective:	Inactive:
---------------	----------------------	------------	-----------

<b>CSU Transfer:</b>	Effective:	Inactive:
----------------------	------------	-----------

<b>UC Transfer:</b>	Effective:	Inactive:
---------------------	------------	-----------

**CID:**

**Certificate/Major Applicable:**

Both Certificate and Major Applicable

## **COURSE CONTENT**

**Student Learning Outcomes:**

At the conclusion of this course, the student should be able to:

1. Students will be prepared to take the California BAR (Bureau of Automotive Repair) smog technician licensing examination.

**Objectives:**

At the conclusion of this course, the student should be able to:

1. Perform a Basic and Enhanced area smog check.
2. Perform all required record keeping related to the smog check tests.
3. Properly diagnose emission failures.

**Topics and Scope:**

1. Review of emission control test procedure in Basic and Enhanced areas.
2. Emission control systems operation and service
  - A. PCV (Positive Crankcase Ventilation) systems
  - B. EVAP (Evaporative) system
  - C. Spark control system
  - D. TAC (Thermostatic Air Cleaner) systems
  - E. Catalytic converters
  - F. EGR (Exhaust Gas Recirculation) system
  - G. AIS (Air Injection System) system

3. Basic and Enhanced area smog check procedures
  - A. Vehicle identification and data entry
  - B. Emission control system identification and data entry
  - C. Basic area two speed tailpipe test
  - D. Enhanced area ASM (Acceleration Simulation Mode) dynamometer test
  - E. Functional tests
  - F. OIS (OBD Inspection System) testing equipment operation
  - G. BAR 97 testing equipment operation
4. Laws related to technician licensing
5. Laws related to Smog Check Station licensing
6. Laws and procedures related to smog testing
7. Emission failure diagnosis

**Assignment:**

1. Student will be required to keep a notebook of all required BAR assignments and lab worksheets
2. Assigned reading 20 to 30 pages a week
3. Perform Basic and Enhanced smog check procedures and correctly diagnose emission failures
4. Multiple choice exams and quizzes

**Methods of Evaluation/Basis of Grade:**

**Writing:** Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

None, This is a degree applicable course but assessment tools based on writing are not included because problem solving assessments and skill demonstrations are more appropriate for this course.

Writing  
0 - 0%

**Problem Solving:** Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Lab reports and required BAR assignments; notebook

Problem solving  
10 - 20%

**Skill Demonstrations:** All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Lab work sheets

Skill Demonstrations  
30 - 40%

**Exams:** All forms of formal testing, other than skill performance exams.

Multiple choice exams and quizzes

Exams  
35 - 45%

**Other:** Includes any assessment tools that do not logically fit into the above categories.

**Representative Textbooks and Materials:**

Laws and Regulations Pertaining to California Automotive Repair Dealers. Bureau of Automotive Repair, 2007 edition (Classic in field)

Advanced Emissions Diagnostics. California Institute of Automotive Technology, 1998 (Classic in field)

OBD II & Second Generation Scan Tools. NAPA Institute of Automotive Technology, 1998 (Classic in field)

BAR Smog Check Manual. Bureau of Automotive Repair (BAR), 2013

BAR Smog Check Reference Guide. Bureau of Automotive Repair, 2014

Instructor prepared materials