

CUYAMACA COLLEGE

OFFICIAL COURSE OUTLINE

AUTOMOTIVE TECHNOLOGY 193 – ASSET – ENGINE REPAIR

3 hours lecture, 4.5 hours laboratory, 4.5 units

Catalog Description

Ford ASSET course to include diagnosis of engine failures, engine removal and disassembly techniques, engine cleaning and measuring practices, machining principles, assembly procedures and in-car repairs. Engine design theory will be discussed. Preparation for ASE Certification. Complemented by required work experience in the dealership.

Prerequisite

None

Course Objectives

Students will be able to:

- 1) Acquire safe working habits
- 2) Relate engine operating theory to practical engine failure diagnosis
- 3) Perform engine repair to prescribed industry standards

Special Materials Required of Student

- 1) Mechanic's hand tool set
- 2) Approved safety glasses
- 3) Specialized engine repair tools

Minimum Instructional Facilities

- 1) Auto tech lab (6 bays)
- 2) Classroom with projection screen
- 3) Various training vehicles, engines
- 4) Engine assembly room

Course Content

- 1) Lecture:
 - a. Introduction and safety
 - b. Equipment operation
 - c. Engine systems
 - d. Engine failure diagnosis
 - e. In-vehicle repair
 - f. Engine removal
 - g. Engine disassembly
 - h. Precision measuring devices
 - i. Cleaning and inspection of parts
 - j. Cylinder head diagnosis and repair
 - k. Engine assembly and installation
- 2) Lab:
 - a. Introduction and safety
 - b. Laboratory procedures
 - c. Equipment operation
 - d. Engine removal
 - e. Disassembly procedures
 - f. Cleaning operations
 - g. Part inspection and measurement
 - h. Cylinder head and valve servicing
 - i. Assembly procedures
 - j. Engine installation
 - k. Pre-oiling and start-up procedures

Method of Instruction

- 1) Lecture and demonstration
- 2) Individual assistance

Method of Evaluation

A grading system will be established by the instructor and implemented uniformly. Grades will be based on demonstrated proficiency in 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, exams (multiple choice, fill-in, true-false, short essay)
- 2) Observation of student work
- 3) Inspection of work completed
- 4) Hands-on performance exam

Texts and References

- 1) Required: None
- 2) Supplemental: None