

# AUTO 151: ENGINE SERVICE, DIAGNOSIS AND REPAIR

## Citrus College Course Outline of Record

Heading	Value
Effective Term:	Winter 2021
Credits:	6
Total Contact Hours:	221
Lecture Hours :	54
Lab Hours:	167
Hours Arranged:	0
Outside of Class Hours:	108
Prerequisite:	AUTO 101.
Transferable to CSU:	Yes
Transferable to UC:	No
Grading Method:	Standard Letter

## Catalog Course Description

Intended for those seeking a career in the automotive service and repair industry. This ASE Education Foundation (formerly NATEF) certified course is one component of the Toyota Technical Education Network and Technicians' Education Cooperative programs. The course covers essential engine theory, inspection, diagnosis, service and repair. Engine disassembly, inspection, measurements and assembly are covered, with emphasis on in-vehicle repairs. The course prepares students for ASE Engine Repair (A1) certification exam. A valid driver's license is required for this course. 54 lecture hours, 167 lab hours.

## Course Objectives

- Upon satisfactory completion of the course, students will be able to diagnose, service and repair engine mechanical and lubrication systems. Also, students are to complete ninety-five percent (95%) of Priority 1 (P-1), seventy percent (70%) of Priority 2 (P-2) twenty-five percent (25%) of the Priority 3 (P-3) required Automotive Service Excellence- Education Foundation (formerly NATEF) objectives for Engine Repair (A1). Please see attached ASE-EF objectives for A1 Engine Repair or [www.aseeducationfoundation.org](http://www.aseeducationfoundation.org) for the most current objectives.

## Major Course Content

1. Engine Rebuilding Safety
2. Fasteners, seals and gaskets related to engine repair.
3. Theory of Operation of Various Engines and Related Systems
4. Diagnosis, Repair and Service of Engines and Related Systems Using Manufacturer Standards and Service Information
5. Engine Rebuilding Procedures Including Disassembly, Cleaning and Inspection Using Manufacturer Standards and Service Information
6. Engine Assembly Using Manufacturer Procedures and Service Information

## Lab Content

1. Diagnosis, Repair and Service of Engines and Related Systems Using Manufacturer Standards and Service Information

2. Engine Rebuilding Procedures Including Disassembly, Cleaning and Inspection Using Manufacturer Standards and Service Information
3. Engine Assembly Using Manufacturer Procedures and Service Information.

## Suggested Reading Other Than Required Textbook

electronic journals, forums, and approved automotive periodicals

## Examples of Required Writing Assignments

Students will locate a relevant technical article and write a critical evaluation of that article, including its technical merit in comparison to the textbook, application to current course topics, and the usefulness of the article to their continued studies.

## Examples of Outside Assignments

Students will locate a relevant technical article and write a critical evaluation of that article, including its technical merit in comparison to the textbook, application to current course topics, and the usefulness of the article to their continued studies.

## Instruction Type(s)

Lecture, Lab, Online Education Lecture