

AUTO 51 Course Outline as of Fall 2005**CATALOG INFORMATION**

Dept and Nbr: AUTO 51 Title: AUTO ENGINES

Full Title: Automotive Engines

Last Reviewed: 2/24/2020

Units	Course Hours per Week		Nbr of Weeks		Course Hours Total	
Maximum	7.00	Lecture Scheduled	5.00	17.5	Lecture Scheduled	87.50
Minimum	7.00	Lab Scheduled	7.00	17.5	Lab Scheduled	122.50
		Contact DHR	0		Contact DHR	0
		Contact Total	12.00		Contact Total	210.00
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 175.00

Total Student Learning Hours: 385.00

Title 5 Category: AA Degree Applicable

Grading: Grade Only

Repeatability: 39 - Total 2 Times

Also Listed As:

Formerly:

Catalog Description:

Lecture, demonstration and practical lab experience in the study of the operation, troubleshooting, and overhaul of most current types of automobile engines. Emphasis on the proper use of tools and equipment. Formerly Auto 51 and Auto 51L.

Prerequisites/Corequisites:**Recommended Preparation:**

Course Completion of AUTO 52 OR Course Completion of AUTO 155 (or AUTO 53) OR Course Completion of AUTO 154 (or AUTO 54)

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

Description: Lecture, demonstration, and practical lab experience in the study of the operation, troubleshooting, and overhaul of most current types of automobile engines. Emphasis on the proper use of tools and equipment. Formerly auto 51 and Auto 51L. (Grade Only)

Prerequisites/Corequisites:

Recommended: Course Completion of AUTO 52 OR Course Completion of AUTO 155 (or

AUTO 53) OR Course Completion of AUTO 154 (or AUTO 54)

Limits on Enrollment:

Transfer Credit: CSU;

Repeatability: Total 2 Times

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	Area		Effective:	Inactive:	
CSU GE:	Transfer Area		Effective:	Inactive:	
IGETC:	Transfer Area		Effective:	Inactive:	
CSU Transfer:	Transferable	Effective:	Fall 1981	Inactive:	Fall 2018
UC Transfer:		Effective:		Inactive:	

CID:

Certificate/Major Applicable:

Certificate Applicable Course

COURSE CONTENT

Outcomes and Objectives:

Students will be able to identify engine components and explain the operation of an automobile engine. Diagnose engine problems and repair automobile engines. The student should be able to pass the A.S.E. Engine Repair Certification exam, and enter the automotive trade as an apprentice level technician specializing in engine repairs

Topics and Scope:

This course will provide classroom instruction relating to the diagnosis and repair of the following:

1. Engine Basics
2. Engine Repair Tools, Fasteners, and Safety Information
3. Reference Materials
4. Engine Removal
5. Engine Disassembly and Cleaning
6. Measurements and Inspection
7. Cylinder Heads and Valve Service
8. Camshafts and Valve Train Service
9. Cylinder Block Preparation
10. Crankshaft and Bearing Service
11. Piston and Connecting Rod Service
12. Gaskets, Sealants, and Engine Assembly
13. Engine Installation and Operation
14. In-Car Engine Repair and Maintenance

Assignment:

Students will be required to keep a notebook of all class assignments and class notes. In the laboratory at the completion of each unit students will demonstrate through performance exams and lab exercises the ability to perform each procedure involved in rebuilding an automotive engine.

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, Exams

Problem solving
5 - 10%

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

Class performances, Performance exams

Skill Demonstrations
30 - 40%

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

Multiple choice, Matching items, Completion

Exams
35 - 45%

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

Attendance

Other Category
10 - 15%

Representative Textbooks and Materials:

Automotive Engines, 3rd Ed., Gilles, T., Delmar Publications, 1996