

Clackamas Community College

Online Course/Outline Submission System

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Section #1 General Course Information

Department: Automotive Technology: Auto Mechanics

Submitter

First Name: Jay
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Course Prefix and Number: AM - 133

Credits: 7

Contact hours

Lecture (# of hours):
Lec/lab (# of hours): 154
Lab (# of hours):
Total course hours: 154

For each credit, the student will be expected to spend, on average, 3 hours per week in combination of in-class and out-of-class activity.

Course Title: Engine Systems

Course Description:

This course is designed to provide students with the entry-level skills necessary to repair automobile engines. Includes General Engine Diagnosis; Cylinder Head and Valve Train Diagnosis and Repair; Engine Block Assembly Diagnosis and Repair; Lubrication and Cooling Systems Diagnosis and Repair.

Type of Course: Career Technical Preparatory

Is this class challengeable?

Yes

Can this course be repeated for credit in a degree?

No

Is general education certification being sought at this time?

No

Does this course map to any general education outcome(s)?

No

Is this course part of an AAS or related certificate of completion?

Yes

Name of degree(s) and/or certificate(s): Automotive Service Technology AAS; Career Pathway Certificate, Under Hood Technician

Are there prerequisites to this course?

No

Are there corequisites to this course?

No

Are there any requirements or recommendations for students taken this course?

No

Are there similar courses existing in other programs or disciplines at CCC?

No

Will this class use library resources?

Yes

Have you talked with a librarian regarding that impact?

No

Is there any other potential impact on another department?

No

Does this course belong on the Related Instruction list?

No

GRADING METHOD:

A-F or Pass/No Pass

Audit: Yes

When do you plan to offer this course?

✓ **Spring**

Is this course equivalent to another?

If yes, they must have the same description and outcomes.

No

Will this course appear in the college catalog?

Yes

Will this course appear in the schedule?

Yes

Student Learning Outcomes:

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

1. demonstrate general engine diagnosis including engine removal and reinstallation (R & R);
2. demonstrate cylinder head and valve train diagnosis and repair;
3. demonstrate engine block assembly diagnosis and repair;
4. demonstrate lubrication and cooling systems diagnosis and repair.

This course does not include assessable General Education outcomes.

Major Topic Outline:

1. Engine Operation, Parts, and Specifications
2. Coolant
3. Cooling System Operation and Diagnosis
4. Engine Gasoline Oil
5. Lubrication System Operation and Diagnosis
6. Engine Condition Diagnosis
7. In-Vehicle Engine Service
8. Engine Removal and Disassembly
9. Engine Cleaning and Crack Detection
10. Cylinder Head and Valve Guide Service
11. Camshafts and Valve Trains
12. Pistons, Rings, and Connecting Rods
13. Engine Blocks
14. Crankshafts, Balance Shafts and Bearings
15. Gaskets and Sealants
16. Engine Assembly and Dyno Testing
17. Engine Installation and Break-In

Does the content of this class relate to job skills in any of the following areas:

- | | |
|--------------------------------------|-----------|
| 1. Increased energy efficiency | No |
| 2. Produce renewable energy | No |
| 3. Prevent environmental degradation | No |
| 4. Clean up natural environment | No |
| 5. Supports green services | No |

Percent of course: 0%

First term to be offered:

Specify term: Spring 2017
