

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 - 129

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: Electrical Systems

Course Description:

This course covers general electrical system diagnosis; battery diagnosis and service; starting system diagnosis and repair; charging system diagnosis and repair; lighting 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 Technology AAS, Under Hood Technician certificate, Under Car Technician - Automatic Transmission, Under Car Technician - Manual Transmission

Are there prerequisites to this course?

Yes

Pre-reqs: MTH-020 or placement in MTH-050, pass WRD-080 or placement in WRD-090

Have you consulted with the appropriate chair if the pre-req is in another program?

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?

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?

- Summer
- Fall**
- Winter
- Spring
- Not every term
- Not every year

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. discuss and diagnose general electrical systems,
2. perform battery diagnosis and service,
3. diagnose and repair starting systems,
4. diagnose and repair charging system,
5. diagnosis and repair lighting systems.

This course does not include assessable General Education outcomes.

Major Topic Outline:

1. Automotive electricity fundamentals provided with hands on ATech 1810A training boards and curriculum
2. Service information, tools, and safety
3. Environmental and hazardous materials
4. Electrical fundamentals
5. Electrical circuits and Ohm's Law
6. Series circuits
7. Parallel circuits
8. Series-parallel circuits
9. Circuit testers and digital meters
10. Automotive wiring and wiring repair
11. Wiring schematics and circuit testing
12. Magnetism and electromagnetism
13. Batteries: testing and service
14. Cranking system: diagnosis and service
15. Charging system: diagnosis and service
16. Lighting and signaling circuits

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:

Next available term after approval

:
