

Clackamas Community College

Online Course/Outline Submission System

Section #1 General Course Information

Department: Manufacturing

Submitter

First Name: Mike

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Course Prefix and Number: IMT - 139

Credits: 2

Contact hours

Lecture (# of hours):

Lec/lab (# of hours): 44

Lab (# of hours):

Total course hours: 44

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: Principles of Troubleshooting I

Course Description:

Emphasizes theories and practices useful in troubleshooting failures in electrical applications. Focuses on the overall philosophy and strategy of troubleshooting, drawing applications from residential and varied industrial situations. Includes laboratory projects.

Type of Course: Career Technical Preparatory

Reason for the new course:

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): Industrial Maintenance 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?

Yes

Recommendations: Completion of at least one of EET-112, EET-137 or MFG-130

Requirements: None

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?

✓ **Winter**

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. describe troubleshooting basics and strategies,
2. describe basic electrical theory,
3. identify common electrical symbols and abbreviations,
4. conceptualize some complex processes in simple block flow terminology,
5. use schematics, ladder diagrams, ratings, nameplate values, and specifications.

This course does not include assessable General Education outcomes.

Major Topic Outline:

1. Troubleshooting Method.
2. Basic electrical theory.
3. Symbols and circuit types.
4. Meters, measurements and terminology.
5. Relays, contactors and motor starters.

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

:
