

Clackamas Community College

Online Course/Outline Submission System

 Show changes since last approval in red**Section #1 General Course Information****Department:** Manufacturing**Submitter**

First Name: Wayne

Last Name: Sellevaag

Phone: 3841

Email: waynes

Course Prefix and Number: EET - 239

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 II**Course Description:**

Covers advanced applications of diagnosis, maintenance and repair of systems. Also includes preventive maintenance, applied statistical process control and RF power generation.

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): Electronics Engineering Technology programs

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 EET-139

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?

✓ **Fall**

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. understand troubleshooting advanced strategies, Total Preventive Maintenance, applied SPC, RF (Radio Frequency) troubleshooting;
2. calculate and solve equations for various parameters that determine a circuit's operation and then measure the results in the circuit,
3. debug circuits using various components such as: transistors, diodes, resistors, LED's, switches, operational amplifiers and regulators;
4. demonstrate proper use of oscilloscopes, digital multi-meters, bench power supplies and function generators during lab exercises;
5. troubleshoot various circuits and determine possible failure modes.

This course does not include assessable General Education outcomes.

Major Topic Outline:

1. PC troubleshooting review.
2. Schematic symbols review.
3. Transistors, opamps, transformers, digital basics review.
4. Statistical process control & total preventive maintenance.
5. RF plasma equipment overview.

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

:
