Clackamas Community College

Online Course/Outline Submission System

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Section #1 General Course Information

Department: Manufacturing

Submitter

First Name: Jim
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Course Prefix and Number: EET - 141

 # Credits: 4

Contact hours

Lecture (# of hours):
Lec/lab (# of hours): 88
Lab (# of hours):
Total course hours: 88

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 Fundamentals II

Course Description:

Learn methods of electrical circuit analysis. Use Norton and Thevenin source conversion and constant current sources. Inductors, capacitors and transient analysis of RC and RL circuits will also be covered.

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?

Yes

Pre-reqs: EET-137

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?

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 concepts of source conversion, current sources, circuit network analysis, inductors and capacitors;
2. analyze circuit networks using Norton, Thevenin, Node, Branch, Mesh and Superposition techniques;
3. describe transient analysis of RC and RL circuits,
4. assemble (prototype bread board) circuits,
5. calculate and solve equations for various parameters that predict circuit operation and then measure the results of the circuit,
6. demonstrate the proper use of the oscilloscope, function generators, etc. during the lab exercises;
7. perform circuit simulations with Multisim software,
8. create technical reports.

This course does not include assessable General Education outcomes.

Major Topic Outline:

1. Source conversion; current sources.
2. Network Theorems.
3. Capacitors and Capacitive charging and discharging.
4. Magnetism, Inductors and induction.
5. Transient analysis of RC and RL 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
: