Clackamas Community College

Online Course/Outline Submission System

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Section #1 General Course Information

Department: Engineering

Submitter

First Name: Eric
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Course Prefix and Number: ENGR - 221L

 # Credits: 0

Contact hours

Lecture (# of hours): 0
Lec/lab (# of hours): 0
Lab (# of hours): 33
Total course hours: 33

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: Electric Circuit Analysis I Lab

Course Description:

Lab Course for ENGR-221. Must be taken concurrently with ENGR-221.

Type of Course: Lower Division Collegiate

Reason for the new course:

Decoupling the lecture and lab portion of the course for increased flexibility of offering multiple lab sections.

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?

No

Are there prerequisites to this course?

No

Are there corequisites to this course?

Yes

Co-reqs: ENGR-221

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: No

When do you plan to offer this course?

✓ **Fall**

✓ **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. explain how currents and voltages are produced and illustrate the mathematical and scientific relationship between them,
2. apply the basic laws of electrical circuits,
3. synthesize the concepts of circuit analysis in order to analyze complex circuit structures.

This course does not include assessable General Education outcomes.

Major Topic Outline:

1. Circuit Variables.
2. Circuit Elements.
3. Simple Resistive Circuits.
4. Techniques of Circuit Analysis.
5. The Operational Amplifier.
6. Inductors and Capacitors.
7. Response of First Order RL and RC 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%

Section #2 Course Transferability

Concern over students taking many courses that do not have a high transfer value has led to increasing attention to the transferability of LDC courses. The state currently requires us to certify that at least one OUS school will accept a new LDC course in transfer. Faculty should communicate with colleagues at one or more OUS schools to ascertain how the course will transfer by answering these questions.

1. Is there an equivalent lower division course at the University?
2. Will a department accept the course for its major or minor requirements?
3. Will the course be accepted as part of the University's distribution requirements?

If a course transfers as an elective only, it may still be accepted or approved as an LDC course, depending on the nature of the course, though it will likely not be eligible for Gen Ed status.

Which OUS schools will the course transfer to? (Check all that apply)

✓ **OIT (Oregon Institute of Technology)** ✓ **PSU (Portland State University)**
✓ **OSU (Oregon State University)**
✓ **OSU-Cascade**

Identify comparable course(s) at OUS school(s)

PSU-ECE221
OSU-ENGR201
OIT-EE221

How does it transfer? (Check all that apply)

✓ **required or support for major**

:

First term to be offered:

Specify term: Fall 2017