

Clackamas Community College
Online Course/Outline Submission System

Section #1 General Course Information

Department: Engineering

Submitter

First Name: Eric

Last Name: Lee

Phone: 6163

Email: elee@clackamas.edu

Course Prefix and Number: ENGR - 222L

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: Electrical Circuit Analysis II Lab

Course Description:

Lab Course for ENGR-222. Must be taken concurrently with ENGR-222.

Type of Course: Lower Division Collegiate

Reason for the new course:

Flexibility in lab offerings.

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-222

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?

✓ 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?

No

Will this course appear in the schedule?

Yes

Student Learning Outcomes:

Upon successful completion of this course, students should be able to:

1. analyze first-order and second-order circuits in both theoretical and laboratory contexts,
2. perform steady-state sinusoidal circuit analysis with phasors,
3. analyze three-phase circuits,
4. calculate all forms of A/C power,
5. apply Laplace transform mathematics to predict and explain the behavior of circuits,
6. explain how motors convert mechanical power into electrical power and perform power generation calculations.

This course does not include assessable General Education outcomes.

Major Topic Outline:

1. Natural responses of RLC circuits.
2. Phasor circuits.
3. Laplace transform analysis.
4. Transient circuit response.
5. Steady-state sinusoidal 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-ECE222
OSU-ENGR202
OIT-EE222

How does it transfer? (Check all that apply)

- required or support for major

:

First term to be offered:

Specify term: Winter 2018
