

**Clackamas Community College**  
Online Course/Outline Submission System

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**Section #1 General Course Information**

**Department:** Manufacturing

**Submitter**

First Name: **Wayne**

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**Course Prefix and Number:** EET - 227

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**# Credits:** 3

**Contact hours**

Lecture (# of hours):

Lec/lab (# of hours): 66

Lab (# of hours):

Total course hours: 66

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.

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**Course Title:** Semiconductor Circuits II

**Course Description:**

Second in a series concentrating on the application, design and circuit analysis of transistor amplifying and switching circuits. Industry standard devices will be used.

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**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-127

**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?

✓ **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. assemble (prototype bread board) circuits, calculate and solve equations for various parameters that calculate the circuit operation and then measure the results of the circuit;
2. construct the circuits using various components such as: resistors, diodes, transistors, LED's, Field-effect Transistors, amplifiers and special purpose diodes SCR's & TRIAC's;
3. demonstrate the proper use of the oscilloscope, digital multi-meter, bench power supplies and function generators during the lab exercises.

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***This course does not include assessable General Education outcomes.***

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Major Topic Outline:

1. Transistors and amplifiers.
2. Semiconductor devices.
3. Special purpose diodes (SCR's & TRIAC's).
4. Filter circuits.
5. Switching circuits.
6. Voltage regulation.

Does the content of this class relate to job skills in any of the following areas:

- |                                      |           |
|--------------------------------------|-----------|
| 1. Increased energy efficiency       | <b>No</b> |
| 2. Produce renewable energy          | <b>No</b> |
| 3. Prevent environmental degradation | <b>No</b> |
| 4. Clean up natural environment      | <b>No</b> |
| 5. Supports green services           | <b>No</b> |

Percent of course: 0%

First term to be offered:

**Next available term after approval**

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