

Clackamas Community College

Online Course/Outline Submission System

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Section #1 General Course Information

Department: Manufacturing

Submitter

First Name: **Craig**
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Course Prefix and Number: MET - 150

Credits: 6

Contact hours

Lecture (# of hours):
Lec/lab (# of hours): 120
Lab (# of hours):
Total course hours: 120

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 Engineering - Project Lead the Way

Course Description:

Introduces students to the fields of engineering and engineering technology. Explores various engineering systems and processes and how math, science and technology are used in the engineering problem solving process. Includes concerns about social and political consequences of technological change. This course is part of the national Project Lead the Way curriculum.

Type of Course: **Career Technical Preparatory**

Is this class challengeable?

No

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 AAS

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?

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?

Not every term

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 careers in engineering, engineering technology and other technical careers to include educational requirements, work responsibilities and job opportunities;
2. apply knowledge of engineering systems to solve problems,
3. use mathematics to model problems and predict the results of proposed solutions,
4. select materials that are appropriate for specific engineering applications.

This course does not include assessable General Education outcomes.

Major Topic Outline:

1. Definition and Types of Engineering.
2. Communication and Documentation.
3. Design Process.
4. Engineering Systems.
5. Statics and Strength of Materials.
6. Materials and Materials Testing in Engineering.
7. Engineering for Reliability.
8. Introduction to Dynamics/Kinematics.

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

:
