

Clackamas Community College

Online Course/Outline Submission System

 Show changes since last approval in red

Date approved: March 6, 2015 Certified General Education Area(s): None

Section #1 General Course Information**Department:** Energy & Utility Resource Management**Submitter**

First Name: Shelly

Last Name: Tracy

Phone: 0945

Email: shellyt

Course Prefix and Number: ERM - 121

Credits: 1**Contact hours**

Lecture (# of hours): 10

Lec/lab (# of hours):

Lab (# of hours):

Total course hours: 10

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: Orientation to the Utility Industry**Course Description:**

Designed to help students develop an understanding of basic electricity and utility systems; from electromagnetism, generation, transmission, distribution and its use in the home and work place. This class is for students with little or no previous knowledge of electricity. It covers basic electricity fundamentals in a fun, non-technical way, incorporating group processes, hand-on activities, and problem solving exercises, videos and slides.

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): Elective in the ERM AAS

Are there prerequisites to this course?

Yes

Pre-reqs: Pass RD-090 with a C or better or placement in RD-115; pass MTH-060 with a C or better or placement in MTH-065; pass WR-095 with a C or better or placement in WR-121, pass CS-090 with a C or better or placement in CS-120; or instructor consent.

Have you consulted with the appropriate chair if the pre-req is in another program?

Yes (A 'Yes' certifies you have talked with the chair and have received approval.)*

Are there corequisites to this course?

No

Are there any requirements or recommendations for students taken this course?

Yes

Recommendations: None

Requirements: Instructor consent

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 Only

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. calculate the cost of running any piece of customer equipment,
2. explain the fundamentals of transformer theory,
3. explain utility generation, distribution and transmission systems;
4. name types of generation plans and options (including renewable energy),
5. apply power formulas of single phase and three phase,
6. identify energy efficiency opportunities and calculate savings.

This course does not include assessable General Education outcomes.

Major Topic Outline:

1. Basic electrical theory and fundamentals.
2. Calculate energy costs for running different types of equipment.
3. Identify energy efficiency opportunities and calculate savings.
4. Utility generation, distribution and transmission systems.
5. Transformer theory and fundamentals.
6. Power formulas of single phase and three phase.
7. Generation future plans and options (including renewable energy).

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

:
