

Clackamas Community College

Online Course/Outline Submission System

Show changes since last approval in red

ERM-201 Energy Applications I: Renewable Energy Resource

General education certified: Yes **No**

- Writing
 Oral Communication
 Arts and Letters
 Science & Computer Science
 Mathematics
 Social Science
 Cultural Literacy
 Health & Physical Education

Approved Date (mm/dd/yyyy): / /

Section #1 General Course Information

Department: Energy & Utility Resource Management

Submitter

First Name: John
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Phone: 0000
Email: johnmcl

Course Prefix and Number: ERM - 201

Credits: 4

Contact hours

Lecture (# of hours): 40
Lec/lab (# of hours):
Lab (# of hours):
Total course hours: 40

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: Energy Applications I: Renewable Energy Resource

Course Description:

Access and interpret the current and potential applications of renewable energy resources throughout the energy and resource industries. This includes renewable energy impacts on generation, transmission, distribution, transportation, and end-use in buildings (homes, office and manufacturing process). The perspectives covered include energy policy (politics), economics (cost/benefit) and technology (physical potential/limits).

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):** Energy & Utility Resource Management AAS & Certificate

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.

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. identify renewable energy resources and their characteristics,
2. explain efficiency of renewable energy resources,
3. use Internet as research tool,
4. demonstrate energy measuring technology, tools and practices;
5. discuss conversion technologies and their applications,
6. describe building performance relating to energy resources and practices.

This course does not include assessable General Education outcomes.

Major Topic Outline:

1. Sources of renewable energy and environmental impact.
2. Measurement and efficiency comparison of energy resources.
3. Technology and measurement practices.
4. Political, social, economic and technological considerations.
5. Marketing, economic, and future energy challenges.
6. Integration of renewable sources with traditional sources.
7. Smart Grid versus traditional grid control methodologies.
8. Scenario analysis for future renewable energy paths.
9. World view versus USA view of renewable energy adoption strategies.

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**

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