

# MINNESOTA WEST COMMUNITY & TECHNICAL COLLEGE

## COURSE OUTLINE

**DEPT. ELEC**

**COURSE NUMBER: 2265**

**NUMBER OF CREDITS: 3**

**Lecture: 2 Lab: 1 OJT: 0**

<b>Course Title:</b>
Alternative Energies

<b>Catalog Description:</b>
Alternative Energies introduces traditional and alternative energy sources. This class will explore the basic principles of traditional energy with an emphasis on alternative energy. Students will develop a basic understanding of solar, biofuels, wind, geothermal and hydro energy sources.

<b>Prerequisites or Necessary Entry Skills/Knowledge:</b>
None

**FULFILLS MN TRANSFER CURRICULUM AREA(S) (*Leave blank if not applicable*)**

- ☐ Goal 1: Communication: By meeting the following competencies:
- ☐ Goal 2: Critical Thinking: By meeting the following competencies:
- ☐ Goal 3: Natural Sciences: By meeting the following competencies:
- ☐ Goal 4: Mathematics/Logical Reasoning: By meeting the following competencies:
- ☐ Goal 5: History and the Social and Behavioral Sciences: By meeting the following competencies:
- ☐ Goal 6: The Humanities and Fine Arts: By meeting the following competencies:
- ☐ Goal 7: Human Diversity: By meeting the following competencies:
- ☐ Goal 8: Global Perspective: By meeting the following competencies:
- ☐ Goal 9: Ethical and Civic Responsibility: By meeting the following competencies:
- ☐ Goal 10: People and the Environment: By meeting the following competencies:

<b>Topics to be Covered</b>
Gain a basic understanding of traditional energy sources.
Learn basic principles of alternative energy sources.
Have a general understanding of the use of traditional and alternative energy sources in the production of electricity.

<b>Student Learning Outcomes</b>
Describe advantages and limitations of different energy sources.

Explain stand-alone systems and utility interconnection.
Identify major components in the production of electricity.
Identify basic components of a solar, air, water, and electric systems.

<b>Is this course part of a transfer pathway:</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> <small>*If yes, please list the competencies below</small>
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