

# MINNESOTA WEST COMMUNITY & TECHNICAL COLLEGE

## COURSE OUTLINE

**DEPT. ELEC**

**COURSE NUMBER: 2265**

**NUMBER OF CREDITS: 3**

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

### Course Title:

Alternative Energies

### Catalog Description:

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.

### Prerequisites or Necessary Entry Skills/Knowledge:

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:

### Topics to be Covered

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.

### Student Learning Outcomes

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.

**Is this course part of a transfer pathway: Yes  No**

**\*If yes, please list the competencies below**

Revised 1/2022