Faculty members are required to have the outline submitted to the Academic Affairs Office. The course outline is the form used for approval of new courses by the Academic Affairs and Standards Council.

**DEPT. ELEC**              **COURSE NUMBER: 2265**

**NUMBER OF CREDITS:** 3   **Lecture:** 2   **Lab:** 1

<table>
<thead>
<tr>
<th>Course Title:</th>
<th>Alternative Energies</th>
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<tr>
<th>Catalog Description:</th>
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<tbody>
<tr>
<td>This course 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.</td>
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**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:

<table>
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<tr>
<th>Prerequisites or Necessary Entry Skills/Knowledge:</th>
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<tr>
<td>NONE</td>
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### Topics to be Covered (General)

- 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

- Students will gain an understanding of how different sources of energy are used in the production of electricity.
- 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 8/19