**IF THIS AFFECTS PROGRAM REQUIREMENTS, A PROGRAM FORM IS REQUIRED**

https://sis.umflint.edu/ord/zwcc/course-change.view change
<table>
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<tr>
<th>Name</th>
<th>Reviewer Type</th>
<th>Review Status</th>
<th>Review Time</th>
<th>Reason</th>
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<tr>
<td>Kristina Hansen</td>
<td>Catalog Editor</td>
<td>Accepted</td>
<td>10-05-2012 09:28</td>
<td></td>
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<tr>
<td>Patricia Slackta</td>
<td>Requester</td>
<td>Accepted</td>
<td>09-10-2012 09:27</td>
<td>Original Request</td>
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<tr>
<td>Rhonda Broadworth</td>
<td>Previewer</td>
<td>Pending</td>
<td></td>
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<tr>
<td>Stephen Turner</td>
<td>Department Chair</td>
<td>Accepted</td>
<td>10-11-2012 02:06</td>
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**Accept or Reject request**

- **Accept Change Request**
  - Reason

- **Reject Change Request**
  - Reason

- **Reject / Amend Change Request**
  - Reason

**RELEASE: 8.5.3**

https://sis.umflint.edu/prod/zwcc course change.view change
Learning Outcome No. 1 - Reflect on one's own learning

Q. Narrative:
R. Students will develop knowledge of different renewable energy sources, energy conservation and energy usage. The need for renewable energy technology to meet the ever increasing demand for energy will be introduced. Students will be required to reflect on their views about renewable energy issues and a potential future energy crisis and how they will address such issues as an individual and as a group.

Q. Assessment tools:
R. Assignments, homework, exams

Learning Outcome No. 3 - Demonstrate the ability to think critically

Q. Narrative:
R. Renewable energy sources and different types of technologies, devices and systems to extract the energy to supplement the traditional energy sources such as fossil power, coal, etc. will be introduced. Students will compare and contrast the relative advantages and challenges associated with renewable energy technologies.

Q. Assessment tools:
R. Assignments, homework, exams

Learning Outcome No. 4 - Demonstrate the ability to think creatively

Q. Narrative:
R. Energy conversion process of how energy is transformed and transferred will be presented. The course will introduce creative approaches used to harness energy from different sources such as tidal waves or recycle of waste materials. Students will be required to brainstorm new renewable energy sources. Students will work in teams and will develop concept maps to evaluate their ideas for new renewable energy technologies.

Q. Assessment tools:
R. Assignments, homework, research paper

Learning Outcome No. 5 - Produce competent written work

Q. Narrative:
R. A final paper describing different types of existing renewable energy devices such as wind turbines, solar panels, etc., and their advantages, limitations and economic feasibility will be required. Students will use journal papers, books, and other library resources to acquire knowledge about the topic.

Q. Assessment tools:
R. Final paper and presentation
Learning Outcome No. 12 - Apply knowledge to complex issues

Q. Narrative:
R. The course content will include how renewable energy is reshaping energy usage due to economics, environmental sustainability, public awareness, and government regulations. Students will develop knowledge about how new renewable energy technologies can influence local, regional, and global economic growth.

Q. Assessment tools:
R. Assignments, exams, community engagement projects