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. SOLR    COURSE NUMBER: 1030

NUMBER OF CREDITS: 2    Lecture: 0    Lab: 2

Course Title:
Solar Energy Construction Projects

Catalog Description:
This course introduces students to basic construction skills and molting methods used in solar air, water, and electric systems. Topics include how to safely and carefully work with roofing, how to plan and assemble racking, how solar modules and panels are mounted, and how the remaining solar components are incorporated.

FULFILLS MN TRANSFER CURRICULUM AREA(S)
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:

Prerequisites or Necessary Entry Skills/Knowledge:
None
## Topics to be Covered
Basics of racking and mounting, structural considerations, hardware options, design and assembly.
Basic knowledge of solar array and solar water heating.
Balance of system function and mounting.

## Student Learning Outcomes
Describe major components of photovoltaic systems.
Describe the basic bonding methods for pipes, ducts and wires in solar systems.
Describe support structures and racking commonly used in solar installations.
Assemble systems according to technical drawings.
Practice working safely with power tools and roofs using personal protective equipment.

## Is this course part of a transfer pathway: Yes ☐ No ☒

Revised 2/20