

Program Outcomes Guide

Program Title: Certificate Solar/Wind Technology

Program Team/Course Instructor(s):

- Greg Betz, Coordinator/Instructor

Cross Walk: Learning Outcomes and Relevant Courses

Learning Outcome	Relevant Course
Outcome #1: Knowledge of wind energy. <ul style="list-style-type: none"> • Identify specifications for wind energy systems. • Perform test procedures (start-up) for wind energy systems. • Perform data collection and evaluation for wind energy systems. • Maintain and troubleshoot wind energy systems. 	AET 102 Introduction to Alternative Energy AET 108 Wind Energy Installation INT 110 Fundamentals of Electricity
Outcome #2: Knowledge of solar energy. <ul style="list-style-type: none"> • Identify specifications for solar energy systems. • Perform test procedures (start-up) for solar energy systems. • Perform data collection and evaluation for solar energy systems. • Maintain and troubleshoot solar energy systems. 	AET 102 Introduction to Alternative Energy INT 110 Fundamentals of Electricity
Outcome #3: Recognize standard safety procedures in the workplace.	INT 104 Facilities Safety and Compliance
Outcome #5: Communicate effectively with customers	BUS 145 Customer Service
Outcome #6: Perform basic electrical and thermal load calculations.	MAT 114 Introduction to Applied Algebra

Assessment (How do students demonstrate achievement of these outcomes?)

- Final Project: Students will install components, test and start-up systems, and collect and analyze data.
- Satisfactory scores on exams and projects.
- Satisfactory scores on exams modeled after industry standard certification exams.

Validation (What methods are used to validate your assessment?)

1. Approval by Industrial Technology/Alternative Energy Technology Advisory Committee
2. Tests comparable to Industry Standard Certification Exams.
3. Faculty Review
4. Project similar in scope real world experience/installation.

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Results (What do the data show?)

Data and feedback show student performance is meeting targeted outcomes. New Testing results and employment activities, as well as hands-on practices show that the majority of the students are achieving desired program outcomes. Feedback, as well as multiple calls for part-time, and a few full-time student workers from regional businesses, indicate that we are addressing the needed skills related to Alternative Energy Technology in our region.

Internship Evaluation Results 2016-2018

Outstanding	Very Good	Average	Marginal	Unsatisfactory
22%	61%	17%	0	0

Follow-up (How have you used the data to improve student learning?)

- Course content is continually modified and content increased and decreased based on advances in technology and shifts in demand.
- The course syllabus reflects these changes, as required each semester.
- New resources and support materials are adopted to meet the outcomes.

Budget Justification

(What resources are necessary to improve student learning?)