

Course Outcomes AET-108 Wind Energy Installation

Course Title: AET-108 Wind Energy Installation

Course Instructor(s): Anthony Valente

Programs: Alternative Energy Technology

Expected Learning Outcomes

- Specify and install a typical wind energy system.
- Collect and evaluate data from a wind energy system.
- Start up a wind energy system.
- Maintain and trouble-shoot a wind energy system.
- Work safely and efficiently.
- Calculate basic electrical load.

Assessment

Assessments will include:

2 written tests and a final written exam

Classroom lab exercises and assignments

Validation

1. Comparison of final exam results with national average skills in the wind energy field of work.
2. The evaluation of student performance and ability to transfer knowledge to next level of class in the program.
3. Consult Advisory Committee participants as to performance of interns and hired students based on ability and knowledge gained.

Results

The results of the testing and final examination will show the level of retention of the classroom materials.

The results of the practice exercises and assignments will show the ability of the student to transfer textbook information to hands-on applications.

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The results of the Advisory Committee input will allow us to place a rate of success in our database for ongoing improvement to the course and advise us of changes in technology and industry standards.

Internships will measure the student outcomes in a real world environment through feedback from internship supervisor.

During the spring 2014 semester it was noted that the average grade for students was 85% in this class. Students performed well with hands on classroom exercises and made typical mistakes that a new person industry would make and therefore learn from the experience. .

Follow-up

The data will be evaluated to improve teaching techniques

The data will be evaluated to help us remain up to date with technology changes.

We implemented the NCCER wind turbine maintenance technician textbook this semester and improved our section on commercial and utility grade wind turbine technology.

Budget Justification

Update textbook to include changes in technology

Update classroom equipment to keep pace with changes in technology

We continued working with the facilities department to install a horizontal wind turbine on the campus. We also implemented a field trip to Potomac Wind Energy for students to get first hand exposure to multiple types of wind Turbines.