

## Course Outcomes AET-106 Photovoltaic Installation

**Course Title:** AET-106 Photovoltaic Installation

**Course Instructor(s):** Anthony Valente, Clay Herzog

**Programs:** Alternative Energy Technology

### Expected Learning Outcomes

- Specify and install a typical photovoltaic system.
- Collect and evaluate data from a solar voltaic system.
- Start up a photovoltaic system.
- Maintain and trouble-shoot a photovoltaic 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 soloa 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 site supervisor.

*During the spring of 2014, 2 graduated students sat for NABCEP installer level exam. Both students past the examination.*

*The average classroom grades for the spring of 2014 were 88% respectively.*

### **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.

*It was noted during student evaluations that there is a desire among the students for more hands on opportunities. The new energy house to be constructed on campus targeting a fall 2015 implementation will enhance the hands on opportunities. However a grid-tie hands-on exercise will be used in the summer session and evaluated for permanent implementation.*

### **Budget Justification**

Update textbook to include changes in technology

Update classroom equipment to keep pace with changes in technology

*No additional budget funds requested at this time.*