

## Course Outcomes AET-101 Problem Solving for AET

**Course Title:** AET-101 Problem Solving for Alternative Energy Technology

**Course Instructor(s):** Jennifer Szczesniak

**Programs:** Alternative Energy Technology

### Expected Learning Outcomes

1. Apply computational techniques and algebraic skills to solve problems encountered in the alternative energy workplace setting (Computational and Algebraic Skills).
2. Apply visualization, spatial reasoning, as well as geometric properties and strategies to model and solve problems related to AET (Geometric Skills).
3. Apply technology, where appropriate, to enhance and facilitate mathematical understanding, as well as an aid in solving problems and presenting solutions to AET situations. (Technological Skills).
4. Communicate and understand mathematical statements, ideas and results, both verbally and in writing which apply to AET problems and situations. (Communication Skills).
5. Work collaboratively with peers and instructors to apply mathematical concepts And solve problems related to AET situations. (Collaborative Skills)

### Assessment

Assessments will include:

2 written tests and a final written exam

### Validation

1. Comparison of final exam results with national average skills in the 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.

## Course Outcomes AET-101 Problem Solving for AET

### **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.

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.

### **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.

### **Budget Justification**

Update textbook to include changes in technology

Update classroom equipment to keep pace with changes in technology