

## **Mechanical Engineering Student's Ability to Communicate Effectively**

### **Mechanical Engineering BS - College of Engineering and Computer Sciences**

#### **Step 1: Student Learning Outcome**

An ability to communicate effectively with a range of audiences.

#### **Step 2: Methods and Measures**

**Direct:** One source of student work (e.g. exam, assignments, and quizzes), will be used across two to four courses that pertain to the outcome using a 5-point scale (Excellent = 5, Above Average = 4, Average = 3, Below Average = 2, Poor = 1).

**Indirect:** Course and Senior Exit Survey.

#### **Step 3: Criteria for Success**

**Direct:** Average score 3.5 on a 5.0 scale.

**Indirect:** 70% ratings in the top two assessment scores of 5 (Excellent) and 4 (Above Average).

#### **Step 4: Results**

**Direct:** Fall 2018 and spring 2019, 3.64/5.0 (64%) in the top two assessment scores of 5 (Excellent) and 4 (Above Average).

**Indirect:** Course survey: Fall 2018 and spring 2019, 4.32/5.0 (86%) ratings in the top two assessment scores of 5 (Excellent) and 4 (Above Average).

Exit survey: Spring 2019, 4.31/5.0 (88%) ratings in the top two assessment scores of 5 (Excellent) and 4 (Above Average).

#### **Step 5: Improvement Actions**

The Assessment and Continuous Improvement Committee will discuss the following:

1. Emphasis and evaluation recommended in multiple courses giving students practice on unit conversions which students struggle with, and which compounds the difficulty of engineering material.
2. Building on the project-based learning initiative, an emphasis on written reports describing project results, in both lab courses and lecture courses where a project is used, as well as standardizing a report format and grading rubric to be shared between instructors and courses.
3. A recommendation that instructors add the library of instructional videos prepared by Dr. Weiss to their course TITANium pages.