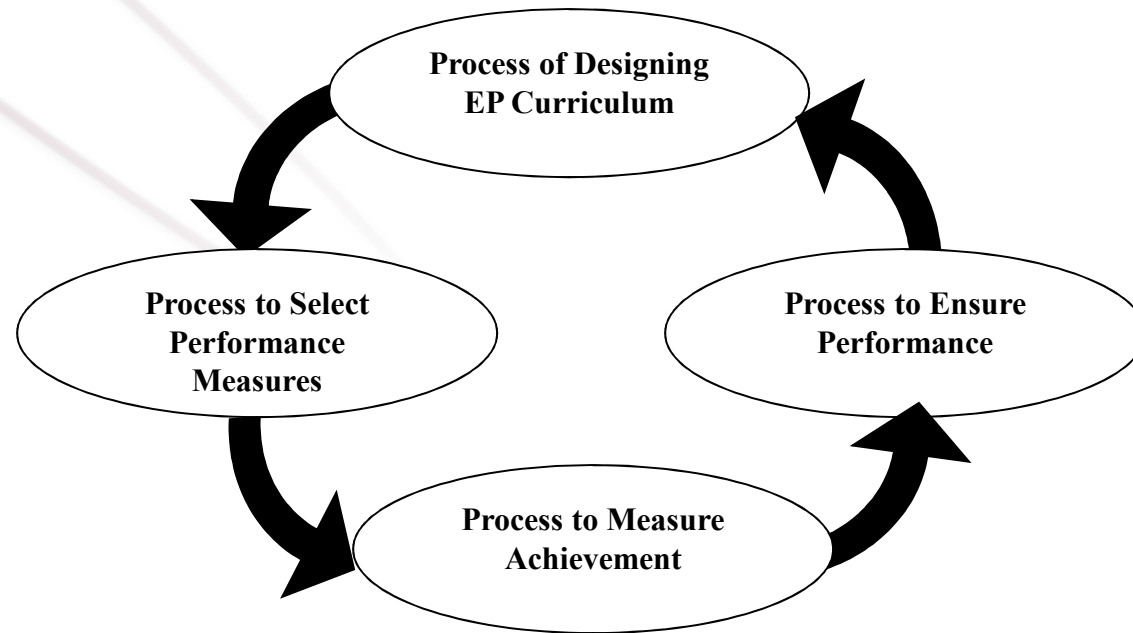


Criterion 4: Continuous Improvement



Continuous Improvement Cycle

Tools for Program Quality Assessment

- Student Evaluations (done for every course)
- Pre-requisite tests (done for most courses)
- Faculty Annual Performance Evaluations (yearly)
- Input from EPEAB (as often as they convene)
- Faculty and Student Input (often)

Program Outcomes

- (a) an ability to apply knowledge of mathematics, science, and engineering
- (b) an ability to design and conduct experiments, as well as to analyze and interpret data
- (c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- (d) an ability to function on multidisciplinary teams
- (e) an ability to identify, formulate, and solve engineering problems

Program Outcomes

- (f) an understanding of professional and ethical responsibility
- (g) an ability to communicate effectively
- (h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- (i) a recognition of the need for, and an ability to engage in, life-long learning
- (j) a knowledge of contemporary issues
- (k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Tools for Program Outcomes Assessment

- Course Program Outcomes Assessment (every course)
 - Each course has one or more Outcomes assigned to it. The instructor will provide a measurement of the Outcome(s) and insert this data in the Post-Instruction Report. This Report also includes comments on past improvements and suggestions for future improvements.
- Faculty Program Outcomes Summary Reviews (~biennial)
 - A team of faculty members, one member per Outcome, reviews all the data for each Outcome from the last several years, including improvements based on the measures of the Outcomes.
- Senior Student Exit Interviews (yearly)
 - The Department Head interviews graduating students. Among other things, they are asked to rate the department's performance on each of the Outcomes.

Status in Self-Study

- **Compiled data from past 5 years of Post-Instruction Reports**
 - Will include data from the past 1 year in May 2018
- **Graphs of measures of all outcomes**
- **Itemized descriptions of Continuous Improvement processes**
 - 19 examples in the areas of Retention, Course Improvements, Curriculum Improvements, Instrumentation and Facility Upgrades