

PROCESS TO DRAFT PROGRAM EDUCATIONAL OBJECTIVES FOR UNDERGRADUATE ENGINEERING DEGREE PROGRAMS

Abstract

This workshop will engage the participants in the process to draft Program Educational Objectives (PEOs) appropriate for undergraduate engineering degree programs at ABET-accredited institutions of higher education. ABET stipulates in its Self-Study Questionnaire under Criterion 2, Category E that there should be a process in place to periodically review and revise PEOs. In the ECE department at our University, the existing PEOs of the fully accredited undergraduate ECE program (previous accreditation period from 2005 to 2011) were deemed to have language that was very similar to that used in the ABET student outcomes. Therefore, it was imperative to distinguish the PEOs from the ABET student outcomes since the PEOs must quantify the expected attainments of graduates a few years after graduation.

First, PEOs must reflect the Mission Statement of the institution and serve as a yardstick of student achievement three to five years following graduation. The objectives represent the expectations of the department from its graduates and must be crafted such that measurable objective evidence can be obtained through alumni surveys. To be consistent and effective, the entire engineering department must contribute to the discussion, ratification, and eventual adoption of the PEOs. Active participation by the faculty in defining the PEOs yield clear and concise objectives and promotes ownership of the goals of the Department and ABET process. However, not all faculty members are necessarily familiar with the assessment language and the process to evaluate the PEOs. In order to ensure a meaningful contribution from all faculty members involved in defining the PEOs, this workshop presents a framework that facilitates the discussion and the steps taken to define the PEOs that are (1) adhering to the Mission of the University (2) achieving consistent and measurable expectations.

Goals of the Workshop

The following are the primary goals or expected learning outcomes of this workshop.

- Understand the step-by-step process to draft the PEOs
- Use carefully crafted PEOs to establish the link between the Undergraduate Engineering Degree program and the Mission of the University
- Work as individuals and on teams to develop the Department-wide consensus on the formulation and assessment language for each PEO
- Learn to clearly distinguish the PEOs from student outcomes

These goals are aligned with those of ASEE because they look to offer attendees ways to nurture their skills, knowledge, and/or materials that they can use in their own teaching practice or scholarship of learning and teaching.