ABET Updates – Fall 2017

Gary Clark, Senior Associate Dean

Topics

- Process overview and timeline
- SS and Visit Basics
  - Visit Schedule
  - Criterion 2, Program Educational Objectives
  - Criterion 3, Student Outcomes
  - Criterion 4, Continuous Improvement
  - APPM Specific Items
  - Display Materials (Student work, design reports, assessment materials)
  - Faculty Interviews

- May 2016 – May 2017:
  – Self Study Initial Draft, Review, Revision, Add Content; Develop Final Draft (Due 6/1).
  – Edit dept websites for content and consistency
  – Revise UG catalog and program literature as needed
- Summer 2017:
  – Submit Final Draft of SS, UG Catalog, and recruitment literature to ABET
  – Pull transcripts; initiate transcript analysis
  – Depts prep and clean labs, shops,… for fall visit
  – Visit Process: Team logistics; PEV's identified; PEV communications w/DH
- Fall 2017
  – Faculty meeting over site visit: Overall awareness and visit specifics
  – Student awareness
  – Team Visit

Visit Schedule

- Sunday, October 29: Team meeting; PEV reviews materials and tours facilities. (Safety!)

- Monday, October 30: Team Meeting; Dean's Presentation; PEV interviews with faculty, staff, students.

- Tuesday, October 31: Final interviews; Develop Draft Exit Statement; Consistency checks; Exit Interview

GENERAL CRITERION 2. PROGRAM EDUCATIONAL OBJECTIVES

- The program must have published program educational objectives that are consistent with the mission of the institution, the needs of the program's various constituencies, and these criteria. There must be a documented, systematically utilized, and effective process, involving program constituencies, for the periodic review of these program educational objectives that ensures they remain consistent with the institutional mission, the program's constituents' needs, and these criteria..

GENERAL CRITERION 3. STUDENT OUTCOMES - EAC

The program must have documented student outcomes that prepare graduates to attain the program educational objectives.

Student outcomes are outcomes (a) through (k) plus any additional outcomes that may be articulated by the program.

- (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
- (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.

GENERAL CRITERION 3. STUDENT OUTCOMES - CAC

The program must have documented student outcomes that prepare graduates to attain the program educational objectives.

Student outcomes are outcomes (a) through (i) plus any additional outcomes that may be articulated by the program.

- (a) An ability to apply knowledge of computing and mathematics appropriate to the program's student outcomes and to the discipline
- (b) An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution
- (c) An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs
- (d) An ability to function effectively on teams to accomplish a common goal
- (e) An understanding of professional, ethical, legal, security and social issues and responsibilities
- (f) An ability to communicate effectively with a range of audiences
- (g) An ability to analyze the local and global impact of computing on individuals, organizations, and society
- (h) Recognition of the need for and an ability to engage in continuing professional development
- (i) An ability to use current techniques, skills, and tools necessary for computing practice.

- The program must regularly use appropriate, documented processes for assessing and evaluating the extent to which the student outcomes are being attained. The results of these evaluations must be systematically utilized as input for the continuous improvement of the program. Other available information may also be used to assist in the continuous improvement of the program.

APPM Specific Items

- I.A.6. Institution catalogs and similar publications must clearly indicate the programs accredited by the commissions of ABET as separate and distinct from any other programs or kinds of accreditation. Each accredited program must be specifically identified as "accredited by the _____ Accreditation Commission of ABET, http://www.abet.org."

- I.A.6.a. Each ABET-accredited program must publicly state the program's educational objectives (PEOs) and student outcomes (SOs).

- I.A.6.b. Each ABET-accredited program must publicly post annual student enrollment and graduation data specific to the program.

- I.E.5.b.(1) Facilities – to assure the instructional and learning environments are adequate and are safe for the intended purposes. Neither ABET nor its representatives offer opinions as to whether, or certify that, the institution's facilities comply with any or all applicable rules or regulations pertaining to: fire, safety, building, and health codes, or consensus standards and recognized best practices for safety.

- I.E.5.b.(2) Materials – Evaluators will review materials sufficient to document: a) the extent of attainment of each student outcome, and b) the program's compliance with Criterion 3 Student Outcomes and Criterion 5 Curriculum, as well as any applicable Program Criteria. These materials are provided either as a part of the Self-Study Report or as displays during the onsite visit, or accessed by evaluators within a suitable on-line storage location utilized by programs delivered fully or partially on-line. Materials provided during the onsite visit are typically textbooks, assignments, exams, and examples of student work in a range of quality. Provision for access to online materials used by the program must be made available during an on-site visit.

APPM Specific Items: Comprehensive Review

- I.E.5.b.(3) Evidence that the program educational objectives (PEOs) stated for each program are based on the needs of the stated program constituencies.

- I.E.5.b.(4) Evidence of a documented, systematically utilized, and effective process, involving constituents, for periodic review of the PEOs stated for each program.

- I.E.5.b.(5) Evidence of the assessment, evaluation, and attainment of student outcomes (SOs) for each program.

- I.E.5.b.(6) Evidence of actions taken to improve the program.

Faculty Interviews

- How do you ensure that students are incorporating appropriate standards/regulations in their projects?
- How do you ensure that students are incorporating multiple realistic constraints in their senior design projects?
- Tell me about the student outcomes in your course(s); and how you collect and use assessment data.
- What is your role in advising students?
- Tell me about the types of univ. and prof. service activities that you are involved with.
- What do you do for professional development?

ABET Terminology

- I.E.8.a.(2)(a) Deficiency – A Deficiency indicates that a criterion, policy, or procedure is not satisfied. Therefore, the program is not in compliance with the criterion, policy, or procedure.

- I.E.8.a.(2)(b) Weakness – A Weakness indicates that a program lacks the strength of compliance with a criterion, policy, or procedure to ensure that the quality of the program will not be compromised. Therefore, remedial action is required to strengthen compliance with the criterion, policy, or procedure prior to the next review.

- I.E.8.a.(2)(c) Concern – A Concern indicates that a program currently satisfies a criterion, policy, or procedure; however, the potential exists for the situation to change such that the criterion, policy, or procedure may not be satisfied.

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