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## DEPARTMENT OF INDUSTRIAL AND SYSTEMS ENGINEERING, UW-MADISON

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<b>Procedure Number:</b>	<b>ISyE P 10.1</b>
<b>Subject:</b>	<b>Assessment of Undergraduate Objectives and Outcomes</b>
<b>Date Issued:</b>	<b>01/25/2019</b>
<b>Supersedes:</b>	<b>None</b>
<b>Written by:</b>	<b>V. Bier</b>
<b>Approved by:</b>	<b>ISyE Faculty</b>
<b>Review/Approved Date:</b>	<b>01/25/2019</b>

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### 1. Purpose:

The purpose of this procedure is to define the steps that the IE Department follows in its continuous assessment and improvement process regarding the undergraduate objectives and student outcomes.

### 2. Scope:

This procedure applies to the IE Chair, Chair of Academic Affairs, IE Faculty, and IE Associate Chair for Undergraduate Affairs, and Undergraduate Student Services Coordinators, who are responsible for and involved in assessment of program educational objectives and student outcomes for our undergraduate program, design and implementation of curriculum changes, and the implementation and communication of the IE undergraduate curriculum. The entire process considers various issues such as employer, alumni, and student needs, departmental resources and other constraints; ABET requirements, and the pursuit of curriculum excellence through continuous improvement.

### 3. Related Procedures and Other Documentation:

<u>Procedure No.</u>	<u>Description of Procedure</u>
IEP 01.1	Semester Time Table Planning & Development Procedure

<u>Other Documents</u>	<u>Description of Document</u>
Student Handbook and Curriculum Requirements	IE Student Guide

### 4. Procedure:

- 4.1 Every six years, the Associate Chair for Undergraduate Affairs will arrange for an alumni survey, to obtain feedback from the alumni on the appropriateness of our program educational objectives, and the possible need for new objectives in response to changing circumstances. Ideally, this should be done in the year before the next regular six-year ABET review.
- 4.2 Every three years, the IE Chair will ensure that the Industrial Advisory Board reviews our program educational objectives, to obtain feedback from the board members on the appropriateness of our objectives and the possible need for new objectives.

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**NOTE 1:** At the time of this writing, the most recent ABET review was in fall 2018, implying that the next alumni survey should be conducted during the 2023-2024 academic year. The most recent review of our objectives by the Industrial Advisory Board was conducted in 2017, implying that the next two reviews should be in 2020 and 2023

**4.3** Every year, the Academic Affairs cluster will review the ABET program educational objectives for appropriateness. Results of recent alumni surveys and/or reviews by the Industrial Advisory Board will be taken into account when available, as well as observations by those faculty members participating in Academic Affairs. Proposed changes to the objectives will be forward to the full faculty for consideration and possible approval.

**4.4** Every year, the department will conduct exit surveys with graduating seniors (e.g., using Educational Benchmarking, Inc., or a department-developed survey).

**4.5** The Associate Chair for Undergraduate Affairs will ensure that each student outcome is assessed at least twice in every six-year period. Outcomes assessment should include at least one direct measure (e.g., student performance in one or more specific courses), in addition to any additional indirect measures above and beyond exit surveys.

**NOTE 2:** We will assess outcomes in one or two courses per year, on a rolling schedule, to equalize the workload from year to year, beginning in fall 2019.

**NOTE 3:** The actual outcomes assessment will ordinarily be accomplished by the instructional staff for the relevant courses, and is not the exclusive responsibility of the Associate Chair for Undergraduate Affairs.

**4.6** Results of student outcomes assessments will be shared with Academic Affairs and the faculty on a regular and systematic basis.

4.6.1 Results of the exit surveys (including any indirect assessment of student outcomes) will be reviewed by Academic Affairs annually, and summarized for review at a faculty meeting if appropriate.

4.6.2 Results of direct assessment in specific courses, and any additional outcomes assessments above and beyond the exit surveys, will be reviewed by Academic Affairs and the entire faculty each year.

**4.7** Academic Affairs will review the results of the student outcomes assessments, and make recommendations regarding whether any curriculum changes are necessary, whether additional data collection is needed, and who should be responsible for the needed actions. These recommendations are then submitted to the full faculty for consideration and possible approval.

**NOTE 4:** Development of suggested curriculum changes based on assessment of student outcomes could be delegated to a specific area group, or to a faculty subcommittee knowledgeable about the area in question, if desired.

**4.8** After any recommended curriculum changes based on assessment of student outcomes have been developed, Academic Affairs completes the redesign of the curriculum to address any other desired changes (e.g., inclusion of new courses that have been developed, deletion of any obsolete requirements). The Chair of Academic Affairs then prepares a committee

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motion for approval, to be presented at an IE Faculty Meeting, and distributes the draft curriculum to the IE Faculty for review and comments prior to the meeting.

- 4.9** The IE Faculty discuss and approve the motion for approval of the new IE undergraduate curriculum, with amendments as needed, or refer the recommended curriculum changes back to Academic Affairs for further refinement.
- 4.9.1 If the recommended curriculum changes are referred back to Academic Affairs, then go back to step 4.8.
- 4.10** The IE Chair presents the faculty-approved IE undergraduate curriculum to the Academic Policy, Curriculum, and Regulation Committee of the College of Engineers for their information and approval.
- 4.11** The Associate Chair of Undergraduate Affairs works with the IE Undergraduate Student Services Coordinators to prepare a new version of the Student Handbook and Curriculum Requirements, revise the advising checklists, and begin the process of informing students about the option of selecting the new curriculum.

**NOTE 5:** Once approved, the redesigned curriculum and/or other curriculum changes will usually be implemented at the start of the following fall semester.

**END OF PROCEDURE**