

Assessment of Student Learning Plan (ASLP): Engineering Program

2017-18 Academic Year

University of Southern Maine

A. College, Department, Date

College _____CSTH_____

Department _____Engineering_____

Date _____5/31/2018_____

B. Contact Person for the Assessment Plan

Name and title _____Mariusz Jankowski_____

C. Degree Program

Name of Degree Program _____BSEE, BSME_____

D. Assessment of Student Learning: Program Assessment

Step 1: Identify the Student Learning Outcomes (SLO's)

- a. Do you have your student learning outcomes published on your department's website? Yes/No

Yes, <http://usm.maine.edu/engineering/abet-accreditation>

- i. If yes, please indicate the url: _____
- ii. If no, please list 3-5 of the most important student learning outcomes for your program. **What will students know by the end of your program?**
- b. Please identify **which of your student learning outcome(s) were assessed this past academic year.** (One or more of the outcomes and corresponding assessment plans could come from your department's CORE Course Blueprint(s).

All

- c. Do you have a **matrix or curriculum map** showing when your student learning outcomes are assessed and in which courses? Yes/No
- i. If yes, do you have this map published on your website? Please indicate url or attach a copy of the curriculum map.

Yes, see table attached to end of this document.

Step 2: Assessment Methods Selected and Implemented

- a. Identify which direct measures (other than course grades), that were used to determine whether students achieved the stated learning outcomes for the degree.

We use course embedded assessments in multiple required courses (see mapping table at end of this document), accumulate the data and review collectively annually. AY 2018 assessment meeting was held 5/23/2018.

- b. Briefly describe when you implemented the assessment activity, and if a scoring rubric was used to evaluate the expected level of student achievement. (This information may be shown on your curriculum map).

The current assessment activities were implemented in 2008, updated in 2014, and again in 2018 to reflect the modified list of ABET approved outcomes. Each instructor uses course specific, well documented assessment vehicles and metrics to measure outcome attainment by students.

Step 3: Using the Assessment results to Improve Student Learning

- a. Briefly describe your unit's process of reviewing the program assessment results (i.e. annual process by faculty committee, etc).

Annual meeting held at the conclusion of Spring semester to review all department assessment activities and student learning outcomes.

- b. What specific changes have been or will be made to improve student learning, as a result of using the program assessment results?

See most recent ABET report (ABET 2015).

c. Date of most recent program review/self-study?

See above

E..Course Assessment Activities: *Is your program able to report any assessment-related activities at the Course-Level... (i.e. created grading rubrics to use in required courses, examined student progress in entry-level courses, developed a new course, etc)? Please briefly explain any assessment projects.*

F. Community Engagement Activities in your departmental curriculum:

a. *Does your department have a student learning outcome that is related to any community engagement activities? If so, please state the outcome.*

b. *Please indicate if any of the community engagement activities listed below are included in your program's curriculum, by noting which activities are required or optional for students in your major.*

<u>Community Engagement Activity</u>	<u>Required/Optional</u>
Student Research (related to a community-based problem)	O
Student-Faculty Community Research Project	O
Internship, or a Field Experience	O
Independent Study (community-related project)	O
Capstone Course (community-related project)	R
Service-Learning (course-based)	R
Study Abroad, or an International Program	O
Interdisciplinary Collaborative Project (community related)	O
Student Leadership Activities (related to a team project)	O
Students/Faculty Community Leadership (advisory boards, committees, conference presentations)	O
Other activities:	

c. *Please list any courses (i.e. EDU 400) that have a community engagement activity in your program.*

Entry-level courses: _____

Mid-level courses: __EGN 301 and EGN 304

Upper-level courses: __EGN 402

Mapping of Required Courses to ABET Student Outcomes 1-7

Selected for Assessment:

EE	Both	ME
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	1: problem solving	2: design, global	3: communicate	4: ethics, prof resp	5: team	6: experiment, interpret data	7: new knowledge
ELE 172							
ELE 271							
ELE 342	Guv					Guv	
ELE 343		Guv					
ELE 351							
EGN 325							
EGN 329							
ELE 314	Jan						
ELE 486							
ELE 489							
EYE 112							
EGN 160							
EGN 210							
EGN 248							
ELE 216							
ELE 217	Luc		Luc	Luc			Luc
ELE 219			Luc	Luc	Luc	Luc	Luc
ELE 323	x						x
EGN 260							
EGN 304			x	x	x		
EGN 301		Dav	Dav	Dav	Dav		
EGN 402	all	all	all	all	all		all
MEE 150							
MEE 270							
MEE 251	Dav						
MEE 259						Dav	
MEE 230							
MEE 360	Lin						
MEE 432			Lin				
MEE 439						Lin	
MEE 331							
MEE 339							
MEE 372			Gho				Gho
MEE 373	Gho						
MEE 374							
MEE 379						Gho	

Criterion 3. Student Outcomes

The program must have documented student outcomes that support the program educational objectives. Attainment of these outcomes prepares graduates to enter the professional practice of engineering. Student outcomes are outcomes (1) through (7), plus any additional outcomes that may be articulated by the program.

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies