

# Assessment of Student Learning Plan (ASLP): Academic Programs

2016-17 Academic Year

University of Southern Maine

*Reminder: All Department Chairs will be responsible for completing an ASLP form by the end of this academic year for each academic program in your department. This campus-wide (annual) form is used to document the ongoing program assessment activities in each department/program. The form was designed to align with the NEASC accreditation- assessment standards.*

*If you have questions about this form, or need assistance with your program assessment plans during this academic year, please contact Susan King, Director of Academic Assessment, 780-4681, [susank@maine.edu](mailto:susank@maine.edu). Please email this form by May 31, 2017.*

*\*To review your department's ASLP form from last year, please use this link below for the ASLP webpage on the assessment website, then click on departmental ASLP's: <https://www.usm.maine.edu/assessment/campus-wide-assessment-student-learning-asl-plan>*

## A. College, Department, Date

College CSTH  
Department Mathematics & Statistics  
Date May 29, 2017

## B. Contact Person for the Assessment Plan

Name and title Laurie Woodman, Chair

## C. Degree Program

Name of Degree Program B.A. Mathematics

## **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? No
- 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?**

Over the course of studies as a mathematics major, students will be able to:

- 1) Translate problems into an appropriate symbolic representation and solve;
- 2) Solve problems using various techniques, in particular those of differential and integral calculus;
- 3) Reason logically and construct and evaluate proofs.

Assessment Resources link: scroll down and select, "Objectives & Outcomes Guidelines" <https://usm.maine.edu/assessment/assessment-resources>

- 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).

Assessment of learning outcome #2 started during the spring 2016 semester continued in 2017.

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

*Assessment Resources link, scroll down to the assessment information list to see examples on “Curriculum Map templates, Curriculum Map SLO’s example, and Curriculum Map Embedded Assignments”*

<https://usm.maine.edu/assessment/assessment-resources>

## **Step 2: Assessment Methods Selected and Implemented**

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

We created a rubric to evaluate the work collected during spring 2016. Two faculty members independently used the rubric to assess whether students achieved the learning outcome.

*Assessment Resources link: scroll down and select, “Direct and Indirect Measures-Strategies for Assessing Learning”, or “Creating & Using Rubrics, and Rubric Grading & Examples”*

<https://usm.maine.edu/assessment/assessment-resources>

*Please note: Generally, the goal of grading is to evaluate individual students’ learning and performance. The goal of assessment is to systematically examine patterns of student learning across courses and programs for purposes of improving educational practices. Grades may be the basis of assessment--for example, when a program agrees on a common assignment and rubric for assessment purposes, and grades are aggregated to develop a picture of average student performance. However, by themselves grades awarded in an individual course do not constitute assessment data.*

- e. *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).*

Outcome 2 was measured during the spring semester for all students enrolled in Calculus C. Work on an identified final exam question was reviewed and scored by two faculty (independently) using the rubric.

Example: Outcome 1 was measured during the fall semester -- all majors completed a problem-solving case study during the \_\_\_ course. Case studies were graded on a rubric by two faculty members.

Example: Outcome 2 was measured during the spring semester -- all majors in the capstone course completed a research project. Research projects will be reviewed and graded by a group of faculty.

### **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).*

The assessment results were reviewed by the Assessment Committee.

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

Through the results, no specific changes have been made to improve student learning, however, through this experience we have learned more about the assessment process.

Through this assessment process we have learned the importance of clearly articulated and measurable student learning outcomes. As a department we have had conversations about outcomes and have begun the process of writing them for the courses in our Foundations Sequence.

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

In progress; Spring – Fall 2017

**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.*

In MAT 120 (Introduction to Statistics) student work is reviewed for a specific outcome. The artifact is a common final exam question.

During the 2016 – 2017 year, faculty drafted student learning outcomes for Calculus A (MAT 152) and Introduction to Probability (MAT 281).

USM Mathematics faculty participated in the Mathematics Program Integration Team, a system-wide committee. This year the committee continued their work on learning objectives that define first semester calculus courses at each campus.

The Coordinator of Developmental Mathematics is evaluating assessment data from the Accuplacer exam to determine appropriate levels for successful placement.

**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? No 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)	R	O
Student-Faculty Community Research Project	R	O
Internship, or a Field Experience	R*	O
Independent Study (community-related project)	R	O
Capstone Course (community-related project)	R	O
Service-Learning (course-based)	R	O
Study Abroad, or an International Program	R	O
Interdisciplinary Collaborative Project (community related)	R	O
Student Leadership Activities (related to a team project)	R	O
Students/Faculty Community Leadership (advisory boards, committees, conference presentations)	R	O
*An internship is required for students in the secondary education pathway.		
Other Activities (not mentioned above):		

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

*Entry-level courses:*

*Mid-level courses:*

*Upper-level courses:* MAT 383, 366, 461 involve an optional community engagement experience.

**G. Additional Comments (Optional):** *Please feel free to give suggestions or feedback on what would help you with the program assessment process.*

Topology (MAT 490) was approved as a Capstone course by the Core Curriculum Committee. Attention was given to student mastery of the capstone student learning outcomes.

The capstone committee is considering other models to satisfy this core requirement within the major.

The department will continue working on establishing student learning outcomes for all of the courses in our Foundations Sequence. For the first time, we had several department-wide meetings focusing on assessment.

***Reminder: Please complete and submit this form by May 31, 2017.***