

Assurance of Student Learning Reflection 2024-2025

<i>Ogden College of Science and Engineering</i>	<i>Mathematics</i>
<i>Mathematics, MS (085)</i>	
<i>Mikhail Khenner</i>	
Is this an online program? ☐ Yes ☒ No	Please make sure the Program Learning Outcomes listed match those in CourseLeaf. Indicate verification here ☒ Yes, they match! (If they don't match, explain on this page under Evaluation)

Instructions: For the 2024-25 assessment, we are asking you to reflect on the last three-year cycle rather than collect data. It's important to take time to look over the results from the last assessment cycle and really focus on a data-informed direction going forward. In collaboration with your assessment team and program faculty, review each submitted template from 2021-2024 and consider the following for each Program Learning Outcome, add your narrative to the template, and submit the draft to your **ASL Rep** by **May 15, 2025**.

Program Student Learning Outcome 1	
Program Student Learning Outcome	Students will be able to read, analyze, and solve problems in statistics commensurate with that of students in a mathematics master's degree program.
Evaluation	The outcome is relevant and measurable. Happy with the outcome.
Measurement Instruments	The instructor of record for STAT 549, Statistical Methods I, a required course for master of science students, will designate a portion of the final exam or project to be evaluated by a committee. The measurement instrument actually measures the outcome directly. The artifact is appropriate, rise of AI does not seem to affect at this point, the rubrics are appropriate and they work.
Criteria & Targets	Criteria for Success and targets are relevant.
Results & Conclusion	<u>Results:</u> We expect 75% of the students to score 75% or higher on the designated portion of the final exam to meet this student learning outcome. This target was successfully and consistently met. <u>Conclusions:</u> Measurement of this student learning outcome is working.
<u>**IMPORTANT - Plans for Next Assessment Cycle:</u>	We are not changing anything for future assessments.

Program Student Learning Outcome 2	
Program Student Learning Outcome	Students will be able to read, analyze, and solve problems in applied mathematics commensurate with that of students in a mathematics master's degree program.
Evaluation	The outcome is relevant and measurable. Happy with the outcome.
Measurement Instruments	Master of science students are required to take MATH 531, Advanced Differential Equations, or MATH 535, Advanced Applied Mathematics-I. The instructor of record for MATH 531 or MATH 535 will designate a portion of the final exam or project to be evaluated by a committee. The measurement instrument actually measures the outcome directly. The artifact is appropriate, rise of AI does not seem to affect at this point, the rubrics are appropriate and they work.
Criteria & Targets	Criteria for Success and targets are relevant.
Results & Conclusion	<u>Results:</u> We expect 75% of the students to score 75% or higher on the designated portion of the final exam to meet this student learning outcome. This target was successfully and consistently met. <u>Conclusions:</u> Measurement of this student learning outcome is working.
<u>**IMPORTANT - Plans for Next Assessment Cycle:</u>	We are not changing anything for future assessments.

Program Student Learning Outcome 3	
Program Student Learning Outcome	Students will be able to read, analyze, and solve problems in discrete mathematics commensurate with that of students in a mathematics master's degree program.
Evaluation	The outcome is relevant and measurable. Happy with the outcome.
Measurement Instruments	Master of science students are required to take MATH 541, Graph Theory, or MATH 542, Advanced Topics in Discrete Mathematics. The instructor of record for MATH 541 or MATH 542 will designate a portion of the final exam or project to be evaluated by a committee. The measurement instrument actually measures the outcome directly. The artifact is appropriate, rise of AI does not seem to affect at this point, the rubrics are appropriate and they work.
Criteria & Targets	Criteria for Success and targets are relevant.
Results & Conclusion	<u>Results:</u> We expect 75% of the students to score 75% or higher on the designated portion of the final exam to meet this student learning outcome.

	This target was successfully and consistently met. <u>Conclusions:</u> Measurement of this student learning outcome is working.
<u>**IMPORTANT - Plans for Next Assessment Cycle:</u>	We are not changing anything for future assessments.

Program Student Learning Outcome 4	
Program Student Learning Outcome	Students will be able to demonstrate command of LaTeX, a powerful mathematical typesetting language.
Evaluation	The outcome is relevant and measurable. Happy with the outcome.
Measurement Instruments	Master of science students are required to take MATH 598, Graduate Seminar: Communicating Mathematics and Technical Writing. The instructor of record for MATH 598 will submit the slides of student's final presentation and their final written project to a committee for evaluation of the student's use of LaTeX. The measurement instrument actually measures the outcome directly. The artifact is appropriate, rise of AI does not seem to affect at this point, the rubrics are appropriate and they work.
Criteria & Targets	The committee will use a grading rubric for the final presentation and the final written project and assign a score of 1 for unsatisfactory use of LaTeX, a score of 2 for a satisfactory use of LaTeX, and a score of 3 for an outstanding use of LaTeX. Criteria for Success and targets are relevant.
Results & Conclusion	<u>Results:</u> We expect 100% of the students to average 2 or more as evaluated by the committee using this grading rubric to meet this student learning outcome. This target was successfully and consistently met. <u>Conclusions:</u> Measurement of this student learning outcome is working.
<u>**IMPORTANT - Plans for Next Assessment Cycle:</u>	We are not changing anything for future assessments.

Program Student Learning Outcome 5	
Program Student Learning Outcome	Students will be able to write with mathematical maturity commensurate with that of students in a mathematics master's degree program.

Evaluation	The outcome is relevant and measurable. Happy with the outcome.
Measurement Instruments	Master of science students are required to take MATH 598, Graduate Seminar: Communicating Mathematics and Technical Writing. The instructor of record for MATH 598 will submit the student's final written project to a committee for evaluation. The measurement instrument actually measures the outcome directly. The artifact is appropriate, rise of AI does not seem to affect at this point, the rubrics are appropriate and they work.
Criteria & Targets	The committee will use a grading rubric for the final project and assign a score of 1 for an unsatisfactory written final project, a score of 2 for a satisfactory written final project, and a score of 3 for an outstanding written final project. Criteria for Success and targets are relevant.
Results & Conclusion	<u>Results:</u> We expect 100% of the students to score 2 or more as evaluated by the committee using this grading rubric to meet this student learning outcome. This target was successfully and consistently met. <u>Conclusions:</u> Measurement of this student learning outcome is working.
<u>**IMPORTANT - Plans for Next Assessment Cycle:</u>	We are not changing anything for future assessments.

Program Student Learning Outcome 6	
Program Student Learning Outcome	Students will be able to speak with mathematical maturity commensurate with that of students in a mathematics master's degree program.
Evaluation	The outcome is relevant and measurable. Happy with the outcome.
Measurement Instruments	Master of science students are required to take MATH 598, Graduate Seminar: Communicating Mathematics and Technical Writing. The instructor of record for MATH 598 will ask the graduate director to appoint a committee to evaluate the final presentation. The measurement instrument actually measures the outcome directly. The artifact is appropriate, rise of AI does not seem to affect at this point, the rubrics are appropriate and they work.
Criteria & Targets	The committee will use a grading rubric for the final presentation and assign a score of 1 for an unsatisfactory final presentation, a score of 2 for a satisfactory final presentation, and a score of 3 for an outstanding final presentation. Criteria for Success and targets are relevant.
Results & Conclusion	<u>Results:</u> We expect 100% of the students to score 2 or more as evaluated by the committee using this grading rubric to meet this student learning outcome. This target was successfully and consistently met. <u>Conclusions:</u> Measurement of this student learning outcome is working.

****IMPORTANT - Plans for
Next Assessment Cycle:**

We are not changing anything for future assessments.