Assurance of Student Learning Reflection 2024-2025	
Ogden College of Science and Engineering	Department of Mathematics
Mathematics, 528	
Ngoc Nguyen	
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 prepared for employment in government, industry, or academic settings.**
Evaluation	Using the last three assessment cycles, this program learning outcome is relevant.
Measurement Instruments	The outcome was measured using one instrument "Employment prospects of seniors will be monitored in an exit survey." We believe this is still the best instrument to use. This is a direct measure.
Criteria & Targets	Program Success Target for this Measurement is that 80% or more of students have clear career plan and feel prepared for those types of jobs. The target was met during the last three assessment cycles. We believe this is an appropriate target for this outcome.
Results & Conclusion	**Results**: The results are what was expected. **Conclusions**: We made no programmatic changes based on the above data.

****IMPORTANT - Plans for Next Assessment Cycle**:	We will continue to collect career data on our senior exit survey, invite graduates back to campus to discuss their careers, and will endeavor to stay in contact with our graduates via social media and other means. We will do this again throughout 2025-28.

Program Student Learning Outcome 2	
Program Student Learning Outcome	**Students will be able to use technology and apply mathematics to solve problems effectively.**
Evaluation	Using the last three assessment cycles, this program learning outcome is relevant.
Measurement Instruments	The outcome was measured using Instrument #1 "Technology usage will be monitored in an exit survey." and Instrument #2 "Completion of a capstone project in MATH 498." We believe they still are the best instrument to use. Both instruments are direct measures. The rise in the use of AI might affect the assignment if students incorporate AI into their project either directly or indirectly. One agenda item for the undergraduate committee during fall 2025 is to address concerns with Math 498. We will include the discussion about the use of AI in Math 498 project and how the rubrics might need to be altered.
Criteria & Targets	Program Success Target for Instrument 1: 80% or more of students feel like they have had adequate exposure to technology in their classes and , and for Instrument 2: 80% or more of students will average a 3 or better on a 4-point scale on rubric measures of the application of mathematics in their senior project. The target was met during the last three assessment cycles. We believe this is an appropriate target for this outcome.
Results & Conclusion	**Results**: The results are what was expected. **Conclusions**: We made no programmatic changes based on the above data.
****IMPORTANT - Plans for Next Assessment Cycle**:	As we work hard to improve our assessment practices and make them more meaningful and effective, it's important each program craft a three-year plan for the following assessment cycle (2025-26, 2026-27, 2027-28) – this process assists in "closing the loop." For example, you may decide to: • collect a more appropriate artifact • create new program outcomes • adjust targets because they are consistently exceeded or not met • need to reconstruct your curriculum map • sequencing of classes might need to be adjusted, or additional class(es) provided

	Whatever your plan is, provide a narrative, in future tense, that indicates how you will approach future assessments. You will be expected to implement any needed changes before the next assessment cycle. We will continue to collect career data on our senior exit survey, invite graduates back to campus to discuss their careers, and will endeavor to stay in contact with our graduates via social media and other means. We will do this again throughout 2025-28.

Program Student Learning Outcome 3	
Program Student Learning Outcome	**Students will have well-developed abilities to utilize critical thinking and communicate ideas effectively.**
Evaluation	Using the last three assessment cycles, this program learning outcome is relevant.
Measurement Instruments	The outcome was measured using Instrument #1 " Completion of a capstone project in MATH 498." We believe this still is the best instrument to use. The instrument is a direct measure. The rise in the use of AI might affect the assignment if students incorporate AI into their project either directly or indirectly. One agenda item for the undergraduate committee during fall 2025 is to address concerns with Math 498. We will include the discussion about the use of AI in Math 498 project and how the rubrics might need to be altered.
Criteria & Targets	Program Success Target for this Measurement is that 80% or more of students average a 3 or better on a 4-point scale on rubric measures of their utilization of critical thinking and the communication of ideas in their senior project. The target was met during the last three assessment cycles. We believe this is an appropriate target for this outcome.
Results & Conclusion	**Results**: The results are what was expected. **Conclusions**: We made no programmatic changes based on the above data.
****IMPORTANT - Plans for Next Assessment Cycle**:	As we work hard to improve our assessment practices and make them more meaningful and effective, it's important each program craft a three-year plan for the following assessment cycle (2025-26, 2026-27, 2027-28) – this process assists in "closing the loop." For example, you may decide to: • collect a more appropriate artifact • create new program outcomes • adjust targets because they are consistently exceeded or not met • need to reconstruct your curriculum map • sequencing of classes might need to be adjusted, or additional class(es) provided Whatever your plan is, provide a narrative, in future tense, that indicates how you will approach future assessments. You will be expected to implement any needed changes before the next assessment cycle. We will continue to collect career data on our senior exit survey, invite graduates back to campus to discuss their careers, and will endeavor to stay in contact with our graduates via social media and other means. We will do this again throughout 2025-28.