

Assurance of Student Learning Reflection 2024-2025

OCSE	Earth, Environmental & Atmospheric Sciences
Geosciences 072	
Jason Polk	
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 graduating from the Geoscience program will develop an applied skillset and breadth of knowledge about the complexity and diversity of local and global human-environmental interactions, as well an understanding their geospatial relationships.
Evaluation	This SLO is still relevant and foundational to the program. It is measurable based on the instruments and expectations, which include coursework performance designed to address the intended topics, as well as written evidence of learning via the completed and defended thesis document. Per external recommendations from our APR review, the comprehensive exam was removed as a requirement effective Fall 2025, so the coursework (indirect) and written thesis (direct) will serve as the primary demonstrations of learning for this SLO.
Measurement Instruments	The defended thesis and coursework performance instruments adequately address this SLO as indirect and direct measures, respectively.
Criteria & Targets	Passing of thesis defense. Thesis committee is comprised of three experts in the thesis subject matter. Two must be EEAS graduate faculty. One may be external career professional or colleague from another university upon approval of the Department Chair. We aim for 90% pass rating of thesis defenses.
Results & Conclusion	Results: Success in coursework and completed theses both meet targeted outcomes and revisions to courses and program structure with regard to core course sequencing over the past few ASL reviews have contributed to continued success with 100% success in matriculation of enrolled students. Additionally, strategic hiring of research-intensive faculty over the past three years has provided additional engagement in research productivity and advising at the graduate level. Conclusions: Three new research faculty have contributed to program growth, rigor, and thesis success, as well as offering additional elective courses and diverse instruction of core courses. Sequencing the core courses over three semesters has allowed students more flexibility in electives early in the program to enhance their foundational skills in their research topics and also aided in paralleling the course content with the stages of their research and thesis completion.

<u>**IMPORTANT - Plans for Next Assessment Cycle:</u>	Current program success and a positive APR review indicate we will continue to use the existing assessment process. Per external recommendations from our APR review, the comprehensive exam was removed as a requirement effective Fall 2025, so the coursework (indirect) and written thesis (direct) will serve as the primary demonstrations of learning for this SLO. We will continue this evaluation process through the next 5-year assessment cycle.

Program Student Learning Outcome 2	
Program Student Learning Outcome	Using the evidence and argument approach, students who graduate with a geoscience degree will demonstrate marketable communication, analytical/research, and problem-solving skills as evidenced through written and oral demonstration of their theses.
Evaluation	This SLO is still relevant and foundational to the program. It is measurable based on the instruments and expectations, which include written theses and oral demonstration of competency within the program's research and learning requirements.
Measurement Instruments	The measurement is accurate and effective for the program.
Criteria & Targets	Criteria and targets are on track, which include successful passing of the oral defense and approval by the thesis committee of the written thesis document. Specifically, at the conclusion of the program, the student must produce a defensible, well-written, fully referenced, publishable graduate thesis on a topic within the geosciences that meets the approval of the advisor and faculty committee of experts (minimum of three). Metrics of quality evaluated by the committee (with the potential for input from the entire graduate faculty as part of the public review process) for an acceptable thesis include: 1) clear and focused research question(s); 2) synthesized and complete literature review; 3) appropriate methodology as approved by the committee; 4) competent data collection and analysis; 4) demonstrated competency in discussing data and results; and 5) appropriate and thorough references, correct grammar and syntax, and proper formatting as required by the Graduate School. Other specific guidelines for style, formatting, length, and related criteria are provided in the Geoscience Graduate Handbook.
Results & Conclusion	Results: The results are as expected with 100% success in passed thesis defenses and completed theses for those enrolled in the program. Conclusions: The current structure of a committee of at least three members who advise and evaluate a written thesis that includes a data-driven interpretation to answer a relevant research question, along with an oral defense of the thesis, continues to be effective and produce quality learning outcomes. The committee must be comprised of at least EEAS graduate faculty. The third committee member may be an external career professional or colleague from another university upon approval of the Department Chair.
<u>**IMPORTANT - Plans for Next Assessment Cycle:</u>	Per the successful APR structure, we will continue the current instruments and targets for this SLO. Creation of an external advisory committee for the program will aid in ensuring thesis topics and deliverables (e.g., publications) are relevant and marketable for both career and doctoral program pursuits.

Program Student Learning Outcome 3	
Program Student Learning Outcome	Students can demonstrate the capacity to fit comprehensive geospatial, geological, meteorological, and/or environmental knowledge and training within broader contexts (broader impacts) relevant in communities or societies.
Evaluation	The SLO is relevant and targets the intended overarching goals of the program and application of knowledge.
Measurement Instruments	All theses must include a clear, comprehensive, and defensible broader impacts discussion of the applicability of the outcomes to the subject and/or society, which is evaluated by the thesis committee and effective in ensuring the research and application of knowledge fit within the intended field and has broader impacts.
Criteria & Targets	Criteria for success and targets are on track, with more than 90% of generated theses having an applied component, including community and regional collaborators, funders, and/or partners. Demonstrated success in job placement with thesis committee members in professional and governmental fields, and in relevant positions indicate further success in thesis research outcomes having broader impacts.
Results & Conclusion	<u>Results:</u> All measurement targets were met, no actions are required, including an increase in the number of applied research theses. <u>Conclusions:</u> Faculty commitment to applied research and engaging students has led to continued success in thesis defenses and completion in this program. Hiring additional faculty in new and complementary research areas, securing external funding with collaborators and partners for applied research, and ensuring rigor in committee review and completed thesis document quality have all contributed to continued success for this SLO.
<u>**IMPORTANT - Plans for Next Assessment Cycle:</u>	An exit survey will be implemented starting next year to target post-graduate placement in jobs and doctoral programs, as well as other ancillary outcomes (internships, partnerships, interviews, etc.) to ensure thesis topics and program structure continue to meet evolving workforce and graduate school expectations.

To add more outcomes, if needed, select the table above and copy & paste below.