



September 20, 2022

TO: JENE MICHAUD, CHAIR OF GEOLOGY

FROM: SERI LUANGPHINITH, ALO *Seri Luangphinit*

SUBJECT: REVIEW OF GEOLOGY SELF-STUDY

CC: BRIAN WISSMAN, DEAN OF CNHS
KRIS RONEY, VICE CHANCELLOR FOR ACADEMIC AFFAIRS

The ALO would first like to thank Dr. Jene Michaud and the other faculty of Geology working on this self-study. Having worked with Dr. Michaud, I am aware of the challenges small programs face in trying to maintain the rigor and integrity of the degree and I can appreciate the perseverance and tenacity on the part of the chair to complete this review.

Per UH Hilo's [program review guidelines](#), the ALO evaluates "the self-study for compliance with WSCUC standards of accreditation, namely that programs are undertaking regular (yearly) assessment of both core competencies and programmatic learning objectives. The ALO should review past self studies and compare them against the most recent program review for progress. In particular, attention is needed to ensure SLOs, PLOs, curriculum matrices, and other elements of ideal practice in assessment are acted upon and that the data is used to 'close the loop' in terms of improving student learning" (pages 4-5). What follows below is my assessment of the current self-study based on this charge.

The [2003 Self Study](#) included "assessment" of the degree but not necessarily of student work (see pages 15-16). In fact there appears to have been some confusion over exactly what constituted assessment. The "assessment" data embedded on page 17 appears to be a breakdown of SSH, FTE, class size, and expenditures/cost per SSH as opposed to real measurements of student learning (SLOs). Nevertheless, the program did report having used the major field test through the 1990s until such time as ETS stopped offering the service (page 19). And there was discussion on learning objectives vis-à-vis specific courses and assignments; narratives weighing standardized tests, summative portfolios, and capstones was also included—this represented a beginning of planning for direct SLO-targeted measurements (see pages 20-23); indirect assessments (surveys and exit interviews) was also discussed (see page 24).

The 2022 Self Study is a marked improvement in that SLOs are clearly stated with measurable skills (page 18), and qualitative data is clearly awarded its own distinct section. The program has also included a long-range assessment plan they have been adhering to (page 33), and some data spanning from 2015 through 2022 (see Appendix D, pages 61-69). Some examples of the data are very clear. For example, Assessment 3 in Fall of 2021 for Geology 300 looked at how well students were mastering key vocabulary and concepts—the data shows 40% of students were outstanding and 60% of students as competent. The write-up included additional information on weaknesses noted outside of the context of this measurement, namely student difficulty with projects and problem solving, that necessitated the instructor's reconsideration of a "higher stakes assignment" that would help him/her place "more emphasis on projects and less on tests," though the latter is what was used to garner the data for this course (page 63). Is it this kind of careful analysis of the data and whether assessment itself is finding the data that is needed to make continual improvements of learning that WSCUC—the independent body that oversees UH Hilo's larger regional accreditation—identifies as best practice and looks for in site visits and reviews of accreditation documents.

Nonetheless, while I wish to commend the 2022 Self Study as substantial progress for the department, there are a few areas that need some improvement. While Assessments 1, 7, and 9 seem to have started in 2015 and continued through 2022, the other assessments were mainly undertaken within the past two years. The quality of assessments was also not consistent—for example, Assessment 9 gives no data. This is still clearly a solid start of programmatic assessment and it is my recommendation that the department stay on course to keep this level of activity going as this is going to be a major concern for WSCUC when it returns for a special visit in 2024. The more serious problem is the lack of regular participation in the [yearly Core Competency Assessments](#) that are required by [WSCUC](#). The Assessment Support Committee was contacted by the coordinator for the PHYS Seminar courses for this past academic year and the Geology program now has externally validated data for its graduating majors in the area of [oral communication](#). This needs to become a more regular undertaking to ensure that there is sufficient data to show students are meeting the universal learning goals we set for them. I would also like to encourage the faculty to continue making critical insights into regular improvement—this is unfortunately missing in the oral communication submission for AY 2021-2022.

It may feel impossible for small programs with limited faculty to undertake assessment; however, the trick is not to try undertaking too many different SLOs at the same time. Simplifying assessment into a manageable timetable will go a long way in sustaining efforts—the commitment to one course per term, with core competency in one semester and program-specific SLO targeted assessment in another may go a long way in alleviating fatigue and anxiety such as that expressed in relation to the capstone: "it is difficult to assess NS learning outcomes because of the buffet-style organization of the program. NS majors are a minority in the classes they take. Assessments cannot be organized around them" (page 47). Even with the capstone, there is no need to try and assess all of the SLOs in this one class every year, especially since this course involves the NS track and other non-geology students. Teachers should look to collect data that will help them improve student performance—locating meaningful and targeted data in smaller quantities will be much more useful than a ton of data on every SLO with no meaningful purpose other than data-collection.

In any event, the 2022 self-study is a solid first step towards meaningful assessment. I look forward to seeing the progress of the department in 2027.