Annual Academic Assessment Report Cover Sheet

Assessment reports are due the 1st Wednesday after the Fall Term

Email to: assessment@unlv.edu

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<td>Program Assessed</td>
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<td>College</td>
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<td>Department Chair</td>
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<td>Assessment Coordinator</td>
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<td>Contact Person for This Report</td>
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Please attach a narrative (not to exceed 4 pages, excluding appendices) addressing the following:

- What are the student learning outcomes? Please provide a numbered list.
- Which learning outcomes were assessed?
- How were they assessed? (Programs must use at least one direct assessment of student learning.)
- Undergraduate programs should assess at least one University Undergraduate Learning Outcome (UULO) each year, which may or may not overlap with a program learning outcome.
- Graduate programs should assess at least one outcome related to one of the following graduate level requirements each year:
  - student engagement in research, scholarship, creative expression and/or appropriate high-level professional practice.
  - activities requiring originality, critical analysis and expertise.
  - the development of extensive knowledge in the field under study.
- What was learned from the assessment results?
- How did the program respond to what was learned?

Please limit the narrative portion of your report to no more than four pages. You may attach appendices with data, tables, charts, or other materials as needed. Please explain the relevant conclusions from any appendices in your narrative. Please contact the Office of Academic Assessment if you have questions or need assistance.
M.S. Program in Geoscience
Learning Outcomes

1. Demonstrate an understanding and appreciation for scientific inquiry / scientific method
2. Demonstrate the ability to define and frame a research problem, including hypothesis
3. Demonstrate the ability to search existing scientific literature for work relevant to a specific problem
4. Demonstrate the ability to execute problem-specific skills at an advanced level
5. Demonstrate the ability to design and carry a substantial independent research project through to completion
6. Demonstrate the ability to successfully present the results of a scientific inquiry in both oral and written formats.

Learning Outcomes 1; 2; 3; 6

GEOL 701: Research Proposal for Geological Society of America Submission
M.S. Students: Enrollment 15, Average grade A-
93% performed satisfactorily (14/15)
7% performed unsatisfactorily (1/15), Grade of B-

GEOL 701: Final Research Proposal
M.S. Students: Enrollment 15, Average grade A
93% performed satisfactorily (14/15)
7% received an incomplete (1/15); but satisfactorily completed it (B+) later.

GEOL 701: Research Proposal Oral Presentation (1st attempt)
M.S. Students: Enrollment 15, Average grade A-
100% performed satisfactorily (15/15)
0% performed unsatisfactorily (0/15)

GEOL 701: Research Proposal Oral Presentation (Final Presentation)
M.S. Students: Enrollment 15, Average grade A
100% performed satisfactorily (15/15)
0% performed unsatisfactorily (0/15)

Faculty Feedback/Advisor Reports
M.S. Students: Enrollment 26.
~ 4% (1/26) students were separated from the program this year due to two consecutive semesters of Unsatisfactory performance.
All other students (~96%) have positive feedback from faculty advisors regarding these 4 learning outcomes.
Learning outcomes 1, 2, 3, and 6 are assessed by performance in specific assignments in GEOL 701. These include:

1. Writing an original research proposal for submission to the Geological Society of America.
2. Writing an original research proposal for their planned dissertation
3. Presenting their research proposal to the class audience (described above as 1st presentation), and
4. Presenting their research proposal to the entire department in a public setting (Final presentation).

These written and orally-delivered proposals are original research developed by the graduate student to test hypothesis and require significant literature review in their fields to explain what is already known, and what specific aspect of the science they propose to study. These assignments require students to demonstrate proficiency in the processes of scientific research and research design as applied to modern geoscience, and includes scientific approaches to field and laboratory research, research and professional ethics, writing, and public presentation.

This year 15 M.S. students enrolled in GEOL 701, where these individual assignments were performed. One student performed unsatisfactorily on the written proposal submitted to GSA (received a B-). One student received an incomplete on the final proposal, but successfully completed it with a B+ the following semester. All of the students performed well in the oral presentation of the proposed research. All students improved their scores between their first presentation (in class) and their final presentation (department-wide).

Additionally, these Learning Outcomes are also measured through feedback from faculty. Feedback from faculty indicate 1 student (of 26) performed unsatisfactorily in progression through the program and was separated from the program. There were no other concerns about these learning outcomes in our current group of M.S. graduate students (26 students). Because all indications are that students are meeting these learning objectives, no specific action items are planned for the upcoming year, other than to continue as is for these learning objectives.

Although this issue does not directly measure any of our learning objectives, there are concerns regarding M.S. student completion of program-related paperwork in a timely manner.

- 65% of current students (17 of 26) are behind in behind in one or more of the following: prospectus, degree program paperwork, selection of committee, proposal defense. One of these is waived because the faculty member and advisor left UNLV this year and that student had to find a new advisor. Several of the other students argue that the graduate school misplaced their paperwork.
- ~4% of current students (1 of 26) have received an unsatisfactory grade (B-).
- ~4% of current students (1 of 26) was separated from the program this year due to two consecutive semesters of Unsatisfactory performance.
The Assessment Committee in cooperation with the Graduate Student Committee, is concerned about these results because this situation results in students taking longer to complete their degree program. The planned action item based on the above data and discussion among faculty is to have the Graduate Coordinator play a larger, stronger, and more consistent communicative role in encouraging students and advisors to complete important paperwork and milestones in a timely manner. Unsatisfactory evaluations will be more rigorously implemented when deadlines are not met. A more rigorous implementation of the existing rules, including loss of funding will be applied. Additionally, many changes are being discussed as to how the timing for progression through the program should occur and how these deadlines can be better structured to help student learning.

Our department has also agreed to apply scholarship monies to better support our students financially. It is hoped that this measure will help alleviate financial pressures on students allowing them to focus better on their learning and progression through the program.

In general, M.S. students are doing well in our program, and despite lagging in timeliness of some paperwork, they are still completing their M.S. degrees on time. However, the numbers of M.S. students is likely to decline as our program takes on more Ph.D. students, and funding rates for teaching assistants remains stagnant. Thus, goals for the program include increased research funding for students, continued excellence in recruitment and more infrastructural research support particularly in laboratory equipment/facilities.

Lastly, the assessment committee discussed our 3yr assessment plan with recommendations for changes and improvements to be developed and incorporated into the next plan. Action items are to take these suggestions to the entire department faculty during the Spring 2017 semester for their consideration and implementation.

Geoscience remains one of the top ranked programs at UNLV, with a national ranking in the top 100 university Geology programs. The Hydrogeology Program was also ranked by the largest groundwater association in the world as in the top 100 programs in North America.