

College: Fairmount College of Liberal Arts and Sciences

Department/Program (s): Geology

Degree (s) Offered: BS/BA Geology
MS EEPS

Triggers: BS for graduates (7.6)

Brief Description of Each Degree:

The Baccalaureate degree programs prepare students with the scientific knowledge to proceed to geologic careers in industry, government, or to be admitted to a geology graduate program.

The MS in EEPS program prepares students to be scientists, professionals, or educators who will be well equipped with general knowledge and skills in methodology, critical and creative thinking in scientific research, and advanced knowledge and skills in geology, environmental science, and physics.

Assessment of Learning Outcomes (for UG and GR):

The UG assessment is based on the measurement of two learning outcomes rooted in demonstrating and application of geoscience skills. The MS program has three outcome based on demonstrating and analyzing geoscience principles. As these are new outcomes, there are no results to report. Student ACT scores and graduate-level GPAs are somewhat mixed in terms of comparison to college and university data. State licensure exams results indicate that WSU geology graduates performed better than either KU or KSU graduates (did not see any actual data). The Department has made strides to increase the number of majors in both programs. There is no evidence that data were used to make improvements.

Placement of Graduates (types of positions, starting salary):

For both programs, data are incomplete as to where they actually end up. The Department provides anecdotal information on where graduates may end up. Again, there are no details of how this information is used for program improvement.

Faculty Resources:

Evidence is provided that indicate faculty are productive in terms of research, publications, and recently, grant activity (received a \$2.4 million grant). The number of faculty in recent years has hindered the Departments ability to be as productive as they would like, including supervising graduate students. The department lost one faculty member in 2010 (Wan Yang) and they are currently searching for a replacement. They have not added any tenure-track faculty to the department since 2004 (Honsheng Cao, who was not reappointed after 2007). Will Parcell remains the "newest" faculty member, arriving in 2001, however, Bill Bischoff former Dean in LAS, is now a full-time faculty in the department.

Sources of External Support:

See above.

Conclusions and Recommendations:

Commendations:

- Committed faculty focused on providing a quality program.
- Improvements made in number of majors in both UG and GR programs.
- The Department acknowledges the need to improve program assessment through evidence-based methods.

By April 1, 2013 (send to the Office of the Provost):

- Document that the program review process is a part of a continuous improvement approach involving all departmental faculty.
- Document program changes that occurred through assessment of student learner outcomes and other data collected.
- The learning outcomes for all programs (and general education courses) should be further developed and a revised assessment process needs to be implemented to include the following for all programs:
 - Learning Outcomes: Statements that describe what students are expected to know and be able to do by the time of graduation. These relate to the skills, knowledge, and behaviors that students acquire through their program (e.g., graduates will have the ability to apply principles of geoscience).
 - Assessment Methods: Direct measures used to identify, collect, and prepare data to evaluate the achievement of learning outcomes (e.g., achieve application of mapping skills evaluated by a rubric, not grades or other indirect measures).
 - Targets: Expectations of students to achieve the desired outcome to demonstrate program effectiveness (e.g., 90% of students will demonstrate at least the benchmark performance on a project).
 - Results: Actual achievement on each measurement (e.g., 75% of the students achieved at least the benchmark performance on the project).
 - Analysis: An evaluation that determines the extent to which learning outcomes are being achieved and leads to decisions and actions to improve the program. The analysis and evaluation should align with specific learning outcomes and consider whether the measurement and target remain valid indicators of the learner.
- Update on plans for increasing graduates in the BS program.
- Address concerns of the Graduate School in terms of the assessment process for the graduate program.

Prior to the next review in 2015:

- Include the new university exit and alumni surveys in assessment plan. This will include placement data, salaries, and student satisfaction.