Department Name: Geology

Date Submitted and Academic Year: Sept. 9, 2013 AY 2013-14

Department Mission Statement: The mission of the SUNY Potsdam Department of Geology is to offer a challenging, high-quality, well-rounded, and comprehensive undergraduate education to our students, providing them with the necessary knowledge, skills, and scientific training for a successful career in geology or geophysics, a solid foundation for graduate school, and/or a career in education.

Department Assessment Coordinator or Faculty Member Completing this Form: Robert Badger

Update on prior years’ “Application of Assessment Results:
Assessment results from Optics & Petrology, Geochemistry, Historical Geology, GIS, Sedimentary Geology and Principals of Paleontology were implemented this past year.

Our mission statement lists three overlapping fields: knowledge, skills, and scientific training. So each of our intended student learning outcomes will address one of these three.

Intended Student Learning Outcome #1 Students will demonstrate a significant amount of geologic knowledge so that they can perform as functioning geologists either in a job or in graduate school.

Connection to Univ/Dept Mission This is item #1 in our department mission statement.

Links with other programs/departments

- Gen Ed Component SP, LB
- Related Courses Chem 105 & 106 for all students; also Math 151 & 152 and College Physics I & II for BS students.

Measurable Criteria and Assessment Method(s)
Measurable criteria are the volumes of technical information learned in individual courses.
Assessment methods designed for each course based on Learning Outcomes on each course syllabus. These include course exit exams administered through Moodle at the end of the semester, ungraded quizzes, ungraded lab exercises, and specifically designated test/exam questions for which data is tabulated.
**Intended Student Learning Outcome #2**

Students majoring in Geology will demonstrate technical skills that they will use in their future jobs or in graduate school. These include writing, speaking, proper use of a Brunton Compass, use of a Petrographic microscope, use of various pieces of geophysical equipment.

**Connection to Univ/Dept Mission**
This is item #2 in our mission statement.

**Links with other programs/departments**
- **Gen Ed Component** LB, WI, SI
- **Related Courses** Labs in Chemistry and Physics

**Measurable Criteria and Assessment Method(s)**
The measurable criteria are relatively straight-forward: can a student properly use a Brunton compass to gather geologic data, can a student properly use a Petrographic microscope to analyze thin sections, can the student give a technical talk before an audience.

Some of these criteria will be measured by designated questions in laboratory exams for which data will be recorded and retained. Others will be measured by student projects in Field Geology, Geophysics, Sedimentary Geology and Structural Geology, in which the students must use the specific equipment to gain the data necessary.

Almost all of our upper level courses, and even some of our 100 level classes, require both oral and written presentations, even though these courses are not designated SI or WI.

The research component, required of our BS students and optional for BA students, requires a written and oral presentation.

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**Intended Student Learning Outcome #3**

Students graduating in geology will demonstrate that they know how to tackle a problem, collect data, synthesize the data, and draw conclusions from it.

**Connection to Univ/Dept Mission**
This is item #3 in our mission statement.

**Links with other programs/departments**
- **Gen Ed Component**

**Measurable Criteria and Assessment Method(s)**
Almost all of our students are involved with independent student/faculty research. It is required for our BS degree, and an option for our BA degree.

Students write a research paper presenting their project, and this paper is supposed to go through at least two re-writes under the supervision of the advising professor.

Some students present their project at in-house seminars, the school-wide Learning & Research Fair, or the northeast sectional meeting of the Geological Society of America.