

Department/Program: Geosciences	Chair/Director: Erin Argyilan	Assessment cycle/year: 2011-12
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Mission/Purpose

The Department of Geosciences at Indiana University Northwest provides undergraduate students a rigorous general background in the field of geology and allied disciplines through integrated classroom, laboratory, field, and research experiences. Our primary teaching mission is to develop in students the skills and knowledge required for career paths that may include graduate school, teaching of earth and environmental sciences, and employment as professional scientists in industry. Toward that mission we offer courses that focus on cultivating critical thinking skills, fostering the ability to think analytically, and developing the ability to communicate both within the discipline and with non-scientists (the public).

Student learning outcomes (Goals):

Goal 1. Program will cultivate critical and analytical thinking skills

Goal 2. Program will produce well-prepared students capable of quantitative and qualitative analyses required by the field

Goal 3. Students will possess a general knowledge of geologic theory and its application for solving geologic and environmental problems

Goal 4. Program will develop in students the ability to communicate scientific concepts with colleagues in the field and also non-scientists.

Which Student learning outcomes (Goals) did you assess this year?

The Department of Geosciences assessed Goals 1-4.

Assessment Summary

Outcomes/Objectives	Measure(s)	Findings	Action Plans
1. Students will conduct qualitative and quantitative analyses (G317; G323; G334)	Grading of laboratory reports generated in each course above the 100-level	Varying levels of success result from a wide range of student preparedness in math and writing	Provide peer and instructor review of reports and opportunities for revision and resubmission
2. Students will communicate scientific concepts to peers and non-science audience	Oral presentations with visual materials (posters or PowerPoints) in courses	80% of students need significant work on written scientific papers and help preparing for oral presentation	Provide a progressive approach to generating research reports: data collection - data reporting – data analysis – written and oral presentation.
3. Students will possess a general knowledge of geologic theory and its application for solving geologic and environmental problems	Course exams	Varying levels of success	Enhanced emphasis on theory

Analysis Questions

Based on your findings and action plans, what primary changes will you make for student learning? Program outcomes? Changes to the assessment process?

1. We are modifying the course G317 – Laboratory and Field Methods in Geology to include a full research project that follows the process of research, data analysis, data presentation in a written paper, editing and modification of the paper, and oral communication of results.

2. As a department we will identify more concrete ways to *measure* our objectives and report the findings. Specifically we will determine which outcome and goals are being assessed by which course in our curriculum.