

Department/Program: Geosciences	Chair/Director: Zoran Kilibarda	Assessment cycle/year:
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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):

Ex. Program will produce well-prepared graduates. (Add more lines as needed.)

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 Goals did you assess this year?

We assessed goals 1,2,3, and 4.

Assessment Summary

Outcomes/Objectives	Measure(s)	Findings	Action Plans
1. Students will conduct qualitative and quantitative analyses (G209; G222;G415)	Grading of laboratory assignments in G209, G222, and G415.	Varying, but generally successful results (60-90%) among majors.	Maintain rigor of lab assignments and encourage collaboration among the peers.
2. Students will communicate scientific concepts to peers and non-science audience	Oral presentations with posters (at national and regional Conferences) and PPT in classroom environment.	Most students made good PPT presentations after receiving feedback on their original PPT. Several were excellent and presented posters and GSA Annual Meeting, and at IU Northwest COAS and Science's conferences.	Maintain rigor of excellence in preparing oral talks in front of peers and non-scientific audience. Encourage less successful students to gain confidence in learning from more successful colleagues.
4. Students will demonstrate intensive writing skills by writing Project assignments	Quality and quantity of written work that includes photos, graphs, figures and proper use and citation of references.	Generally good but can be improved. For some students written project in G209 was their first college paper, and they needed a lot of encouragement and guidance.	Experiment with peer review in future written projects, by assigning more skilled students to work together (review) less skilled students' work.
4. Students will possess a knowledge of geology and its application for solving environmental problems	Course exams and quizzes	Varying levels of success, but generally good, because all but two students passed classes with C or better grade.	Encourage group work and peer collaboration in preparations for quizzes and exams.

Analysis Questions

Ex. 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 will introduce peer review process in preparing oral presentations and written reports in G209 and G415 courses. We'll try to match more successful students to work with less successful students and peer review each other work. Less able students would learn by reading or examining more able students' work and gain from collaboration. More able students will hone their skills by editing work of their less able peers and point to weaknesses that could be removed.