



NORTHERN ILLINOIS UNIVERSITY

College of Liberal Arts and Sciences

Department of Geology and Environmental Geosciences

Major: Geology and Environmental Geosciences

Degree: B.S.

Date Revised: October 2013

Student Learning Outcomes and proposed Methods for collecting data (from assessment plan/status report)

Student Learning Outcomes	
1	Earth Materials: Students will be able to identify, describe, compare, and contrast rocks, minerals, sediments, and soils. Additionally, they will be able to describe the distribution of these materials on Earth and describe their formation.
2	Earth Features: Students will be able to recognize and describe specific modern and ancient Earth features, and be able to explain how they are formed and modified by the interactions of various Earth processes.
3	Earth Processes: Students will be able to discuss the fundamental physical, chemical, and biological processes that operate in and on the Earth system. They will be able to explain the interconnections among various Earth processes, describe how processes acting together can create specific geological environments, and reconstruct how Earth processes have evolved and varied in significance over geological time.
4	Interpretation of the Geological Record: Students will be able to describe the basic history of the solar system, discuss the Earth system, including the geological time scale, the evolution of life, long-term changes in global climate, major transgression and regression events, and the configuration of tectonic plates during key intervals of geological time. Students will also be able to explain linkages between the causes and effects of major Earth events, and reconstruct Earth processes or environments from evidence identified in the geological record.
5	Collection, Evaluation, and Manipulation of Data: Students must be able to accurately collect and synthesize field and laboratory observations or data. They must be able to assess the data quality, recognize sources of data error and bias, and demonstrate basic proficiency with computer programs used to organize, manipulate, analyze and present data.
6	Communication: Students will be able to conduct literature research, summarize the work of others, write technical summaries of research, prepare public presentations, and explain technical information to general audiences, including primary and secondary school students and teachers.
7	Scientific Analysis: Students who can effectively perform this critical thinking will be able to devise original research plans, formulate testable scientific hypotheses, develop multiple working hypotheses to interpret scientific data and observations, assess the quality and accuracy of scientific reporting in the modern media, and assess the approach and results of their own research, as well as the research of others.
8	Societal Significance of Geoscience: Students will be able to recognize, describe and explain short- and long-term environmental issues and risks faced by humans and induced by human activities. In addition, they will be able to explain the ways that geoscience contributes to society, including natural hazard assessment, water and mineral resource management, energy resource exploration and utilization, waste management, environmental protection, environmental and climate change, and education.

Methods of Assessment
<ul style="list-style-type: none"> • Geology 322 (2-7) • Geology 325 (1,3,6,8) • Geology 330 (1,3,5-7) • Geology 335 (2-7) • GEOL 477 Field methods (1-8) • GEOL 478/479 Field techniques (1-7) • Employer survey (1-7) • Alumni survey (1-8)

