

**Cornell College**  
**Departmental / Program Assessment Plan**  
Assessment Project Outline

Department / Program:	Geology
Person Submitting this Form:	Denniston
Date:	10/13/2011

Outcome(s) Being Assessed:

By the end of their major in geology, students will identify the primary rock-forming minerals, be familiar with their physical and chemical composition, recognize the most common sedimentary, igneous, and metamorphic rocks, and the factors involved in their formation, as well as important fossil-forming groups. And they will demonstrate an advanced understanding of: the role played by plate tectonics in mega- and meso-scale structures of Earth's surface, the history of life, the enormity of geologic time, the interaction of lithosphere, cryosphere, hydrosphere, atmosphere, and biosphere.

Assessment Question(s):

*Given the outcome(s) being assessed, what do we want to find out? What information will be useful to us?*

Assessment will include reviewing the final exams in each 300-level geology course (Sed/Strat, Igneous Petrology, Metamorphic Petrology, and Geomorphology) using a rubrik developed by the department. In addition, we will include a senior survey posing the question "How has your understanding of and appreciation for geology evolved due to your GEO major? Please include reference to specific classes and experiences you've taken." Answers will be typed and scored electronically by dept chair also using a rubrik developed by the department.

We are primarily interested in comparing how much the students felt they learned vs what they actually learned. Do GEO majors feel, as I did, that they had only just scratched the surface of the field? If so, they're right. Is this feeling accompanied by a desire to continue learning about geology either through formal (i.e., graduate school) or informal (reading of the popular literature) means?

Intended Uses of the Assessment:

*How will the results of the assessment be used? How can we ensure the information will be useful to us?*

Students need to have their learning framed by some sort of context. Do they realize why what they've learned is important? Do they realize how much they've learned or how their level of expertise in geology compares to our expectations for graduating geology majors?

Gathering and Analyzing Evidence:

What is the best way to get the information we need? What evidence already exists? From whom do we need to collect information? Use the grid below – or one of your own making – to outline your plan for collecting and analyzing evidence.

Method to Collect Evidence	Method to Analyze Evidence	Assessment Question Addressed	Timeline
* one method per row	<p>The final exams in each 300-level geology course (Sed/Strat, Petrology, and Geomorphology), will be copied and stored electronically. All such tests will be scanned and stored electronically by the dept. chair.</p> <p>Senior survey posing the question “How has your understanding of and appreciation for geology evolved due to your GEO major? Please include reference to specific classes and experiences you’ve taken.” Answers typed and scored electronically by dept chair.</p> <p>Geology faculty will keep records of how many alums work in the field today, how many go on to grad school, and the quality of the grad schools they attend. All such info will be stored</p>	<p>The geology faculty will review these exams using a rubrik. Student answers should reflect a level of understanding that is both broad and nuanced levels.</p>	<p>Implemented every year beginning in 2010-2011.</p>
	<p>GEO 485 in association with whichever advanced elective they choose to pursue (<i>The Origin of Mountains, Paleocology, or Climates of the Ice Age</i>)</p>	<p>Each geology major, upon completion of their GEO 485, will submit a final written report that includes an introduction to the research question, sections on methods, results, discussion and interpretation, and conclusions. This study will then be presented at the Cornell Student Symposium and/or at a geological conference.</p>	<p>Completion of the written report and the public presentation of their results will mark success of this objective. Geology faculty will evaluate the level of these projects including how well project was internalized, how has student grown intellectually and as a scientist, how has writing improved, etc. as a means of evaluating how the GEO curriculum prepares majors for independent research.</p>

Method to Collect Evidence: brief description of what will be collected, how, by whom.  
 Method to Analyze Evidence: brief description of how evidence will be analyzed, by whom.