

II. **Program Learning Outcomes:** A description of what you intend for students to know (cognitive), think/feel (affective), or do (psychomotor), when they have completed your degree program. A suggested manageable number of outcomes should be in the range of five to ten. Describe Learning Outcomes review activities*.

a. Program Learning Outcomes:

The program learning outcomes for Liberal Arts and Sciences that are applicable to the Geology sequence (GLG 141-142) are:

- Communicate the significance of facts, concepts, and ideas in spoken and written English which is clear, precise and logical.
- Demonstrate a problem-solving capability through analysis/synthesis.
- Recognize the ways in which a scientific approach can be used to formulate an understanding of the observable world.
- Demonstrate an academic proficiency comparable to students completing the second year of a baccalaureate degree program.

b. End-of-sequence learning outcomes:

The end-of-sequence learning outcomes for GLG 141-142 are:

- Describe basic structure of solar system and earth's relationship to this system.
- Identify minerals and rocks by their physical properties, composition, texture and formation and relate them to their atomic structure.
- Demonstrate an understanding of plate tectonics and the concept of a dynamic planet.
- Demonstrate an understanding of law of uniformitarianism.
- Demonstrate an understanding of the scientific principles related to the age of the earth and the evolution of the earth and its life forms.

No changes have been made to the sequence learning outcomes during the past year.

* Note: Every department is required to review Master Syllabi and Program Learning Outcomes a minimum of every two years.

III. **Assessment Method(s)**: A measurable indicator of success in attaining the stated learning outcome(s). The methodology should be both reliable and valid. Please describe in detail.

- a. Formative Assessment Method(s) and Description: a measurable indicator of student in-progress success in attaining the stated learning outcome(s).

The pre/post comprehensive test was revamped due to results indicating that students were “losing” knowledge. Applications and critical thinking questions were added to compose a test of thirty questions. The test administration schedule was changed so that the pre-test is administered early in GLG 141 and the post-test later in GLG 142. The scores from the pre and post-test have been compared and seems to indicate that students are now better retaining information.

- b. Summative Assessment Method(s) and Description: a measurable indicator of end-of-program success in attaining the stated program learning outcome(s).

Not applicable to end-of-sequence assessment.
Refer to section on summative assessment of the program learning outcomes for Liberal Arts and Sciences.

IV. **Results**: A description of the actual results of overall student performance gathered from the summative assessment(s). (see III.b.)

The twenty possible point post tests from Spring 2000 show an improved mean score of four points. The mean score on the pretest administered in Winter 2000 was 12.37; the mean score on the posttest administered in Spring 2000 was 16.31. Clearly, the results are positive. Further testing and data collecting will continue to verify this as a trend.

V. **Analysis/Actions**: From analysis of your summative assessment results, do you plan to or have you made any adjustments to your program learning outcomes, methodologies, curriculum, etc.? If yes, describe. If no, explain.

The pre/post assessment test was revamped due to inconsistent results. See section III, a. above. Data analysis is now available from the Spring of 1999 post-tests.

VI. **General Education:** A description of where and how the three primary general education outcomes* (communication, thinking, values/citizenship) are assessed.

- a. Where do you assess written communication? Describe the assessment method(s) used. Describe assessment results if available.

General Education skills are course-embedded through student learning activities. Communication skills are practiced through written lab reports and “guided” essays.

- b. Where do you assess oral communication? Describe the assessment method(s) used. Describe assessment results if available.

General Education skills are course-embedded through student learning activities. Oral communication is utilized during team lab activities.

- c. Where do you assess thinking? Thinking might include inventing new problems, seeing relationships and/or implications, respecting other approaches, demonstrating clarity and/or integrity, or recognizing assumptions. Describe the assessment method(s) used. Describe assessment results if available.

General Education skills are course-embedded through student learning activities. The geology sequence emphasizes problem solving and deriving creative solutions. Analytical thinking is developed through use of the scientific method.

- d. Where do you assess values/citizenship/community? These activities might include behaviors, perspective, awareness, responsibility, teamwork, ethical/professional standards, service learning or community participation. Describe the assessment method(s) used. Describe assessment results if available.

General Education skills are course-embedded through student learning activities.

The geology field trip course takes students into locations within the community to “dig” and do research.

* Note: The oral communication checklist and the written communication checklist developed by the General Education Committee were adopted for college-wide use during the 1997-98 academic year by Academic Council. Thinking Guidelines developed by the General Education Committee were piloted by faculty during the 1998-99 academic year. Currently, a Student Honor Code will be piloted in Spring 2001.