Department of Physical Science
Division of Geosciences
2002-2003

Expanded Statement of Institutional Purpose

Mission Statement

The Division of Geosciences strives to provide students at Southern Utah University with excellence in earth science education. Our integrated efforts are directed toward those methods we feel produce the best possible educational experience. The primary goal of the geology faculty is to ensure academic excellence in our students while demanding integrity, building self-esteem, and developing critical thinking skills.

Program Intended Educational Outcomes-2002-2003

Outcomes/Objectives

1. Courses will be taught by faculty with expertise appropriate to their teaching assignments.
2a. Geoscience laboratories, field experiences, and other hands-on experiences will be conducted by faculty members with appropriate expertise in their fields.
2b. Students will practice and demonstrate understanding of theoretical and applied geoscience principles via laboratory experiments, undergraduate research, field experiences, etc.
2c. Graduates in geoscience will write a senior thesis based on their independent research.

Means of Program Assessment and Criteria for Success

Assessment Criteria and Activities

1./2a. Only doctoral qualified faculty with expertise in appropriate geoscience sub-fields who are evaluated in teaching, scholarly, professional commitment, and service at least as "fair/average" in two areas, and as at least "good/above average" in the other two areas will be hired, promoted, and tenured. Faculty will participate annually in development activities to enhance subject knowledge and presentation methods.
2b. Geoscience students will pass their "major" courses with a grade of "C" or better. Graduating seniors will perform acceptably on the subject and general portions of the Graduate Records Examination (GRE).
2c. Geoscience students will also complete directed undergraduate research/senior thesis projects, including presentation of the results at state, regional or national professional meetings.

Summary of Data Collected

1./2a. All four full-time faculty members are doctorally qualified, and have complimentary specializations including low-temperature geochemistry, igneous/metamorphic petrology, paleontology, and physical geography. All participate in teaching development activities, including Chataqua courses, and three faculty members chaired a session of geoscience pedagogy at the annual meeting of the Rocky Mountain Section, Geological Society of America.
2b. Geoscience students have completed their "major" courses with a grade of "C" or better and graduating seniors have performed acceptably on the subject and general portions of the Graduate Records Examination (GRE).

Use of Results

1./2a. At this time, no added action is required for geoscience faculty members.
2b./2c./3. We are attempting to integrate undergraduate research and reporting its results earlier into our curriculum. This past year, not only did seniors present research results, but a sophomore and junior conducted research and presented it at a state and regional meeting, respectively.
4a. Greater effort will be expended to encourage graduate studies. We will contact the natural resources program and determine why our student was not accepted.

Expanded Statement of Institutional Purpose (Cont'd)

Goal Statement

The Division of Geosciences will:
1. Provide expert instruction in all teaching settings: lectures, labs, field trips, etc.
2. Provide expert direction/instruction for competitive opportunities in scholarship, employment, and other experiences.
3. Educate students to think critically and independently, and to improve communicative, creative, analytic and information gathering skills.
4. Prepare students who choose to pursue graduate education.
5. Prepare students who choose to pursue employment in a science related field in business, industry, or public education upon graduation.
6. Provide service courses for other academic and professional programs and for the general education purpose.

Program Intended Educational Outcomes- 2002-2003

Outcomes/Objectives (cont'd)

3. Students will learn and demonstrate the ability to critically think about the principles of geoscience, and to communicate them orally and in writing.
4a. Students desiring graduate degrees will have the opportunity to develop and demonstrate their abilities to meet entrance requirements: tests, scholarship, etc.
4b. Appropriate curricula will be provided for professional geoscience preparation.
5a. Students desiring employment upon graduation will be prepared for business, industry, or public education.
5b. Appropriate curricula will be provided for geoscience technician/earth science employment.
6. In addition to offering courses for the campus general education program, the division will provide geoscience courses that meet the needs of other academic majors (engineering, forestry, biology, etc).

Means of Program Assessment and Criteria for Success

Assessment Criteria and Activities (cont'd)

3. Capstone experiences (senior thesis and field camp) will assess each student's ability to communicate via written and oral reports. Their success in these activities will provide evaluation of prior "course embedded activities" requiring critical, logical, and analytical thinking.
4a./4b. Graduate acceptance/entrance success in graduate geoscience programs will be tracked. In addition, GRE and other relevant scores will be monitored for determining subject matter mastery. (Also, see 2b. above).
5a./5b. Placement of graduates will be monitored annually. Surveys of both students and employers will assess preparedness of geoscience graduates.
6. Surveys of general education and non-geoscience students will be conducted to assess success of courses in providing background knowledge.

Summary of Data Collected (Cont'd)

2c. Graduating geoscience students have all participated in directed senior thesis projects, the results of which were presented in the annual meetings of the Utah Academy of Arts, Letters and Humanities and the Rocky Mountain Section of the Geological Society of America.
3. All geoscience graduates have completed senior thesis and field camp, and their success in these capstone courses provides evidence of competency in "course embedded activities" requiring critical, logical, and analytical thinking.
4. No geoscience graduate applied for admission to geology graduate programs this year. One student applied for, but was not accepted, into a natural resources degree program that emphasized GIS training.
5. Graduates are currently seeking jobs, and their success is being monitored.
6. Surveys were conducted in general education courses (GEOL 1010, 1110, 1210, and PSCI 2010). The data are currently being analyzed and indicated changes will be implemented in future course offerings.