

Department of Physical Science
Division of Geosciences and Physics
Program Intended Educational Outcomes-
2004-2005

Expanded Statement of Institutional Purpose

Mission Statement

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

Goal Statement

The Division of Geosciences and Physics 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 pre-professional (physics) or graduate (geology) 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.

Outcomes/Objectives

1. Courses will be taught by faculty with expertise appropriate to their teaching assignments.
 - 2a. 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 principles via laboratory experiments, undergraduate research, field experiences, etc.
 - 2c. Graduates in geoscience will write a senior thesis based on their independent research.
3. Students will learn and demonstrate the ability to critically think about physical science principles, and to communicate them orally and in writing.
 - 4a. Students desiring professional/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 pre-professional/graduate preparation.
 - 5a. Students desiring employment upon graduation will be prepared for business, industry, or public education.
 - 5b. Appropriate curricula will be provided for technician/physical science employment.
6. In addition to offering courses for the campus general education program, the Division will provide courses that meet the needs of other academic majors (engineering, chemistry, forestry, biology, etc).

Means of Program Assessment and Criteria for Success

Assessment Criteria and Activities

- 1./2a. Only doctoral or professionally qualified faculty with appropriate expertise who are evaluated in teaching, scholarship, 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 and physics students will pass their “major” courses with a grade of “C” or better. Graduating seniors will perform acceptably on the general portions of the Graduate Records Examination (GRE) and pre-professional admissions exams (MCAT and DAT).
 - 2c. Geoscience students will also complete directed undergraduate research/senior thesis projects, including presentation of the results at state, regional, or national professional meetings.
3. Capstone geoscience 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 service course students will be conducted to assess success of our courses in providing background knowledge.