Program Mission:

1. To provide an education in modern geologic fundamentals that will allow B.S. graduates of our Geosciences program to successfully pursue advanced degrees or enter the professional geologic workforce immediately after graduation.

2. To increase general awareness and understanding of geology and geography in relation to the environment and human society.

3. To carry out research in faculty specialties in order to promote faculty currency and to provide research experiences for undergraduates.

Program Goal 1. The geoscience program will graduate 10 majors each year.

Assessment Methods: Track the number of graduates each year.

Results: The number of majors has increased from 24 (fall 2004) to 68 (fall 2011). We graduated 14 students during the 2010-2011 academic year. Our 5-year average is 9.4 graduates/year.

Program Goal 2. The department will increase the dollar amount of externally funded research by 10%.

Assessment Methods: The department Chair will monitor the dollar amount of grants generated by departmental faculty (as PI or co-PI).

Results: A 10% increase over the dollar amount generated by external grants in 2003 ($304,143) was achieved in 2009 ($380,000) and 2010 ($506,639).

Program Goal 3. The department will eliminate seldom-taught courses from our program and concentrate on teaching a smaller number of focused courses.

Assessment Methods: Monitor low-enrollment and superfluous courses.

Results: Fifteen courses have been eliminated since 2005
**Program Goal 4.** The department will increase by 10 percent each year the value of the endowment principal from which the Alumni Scholarships are made available to departmental majors.

Assessment Methods: Monitor donations and endowment growth.

Results: Since 2005, the Alumni Endowment (used to fund scholarships) has increased from $31,332 to $38,277 as of October 2011. We have not achieved a 10% increase every year from 2005 to date (that would total $55,507). One reason, in part, is that we have been granting more scholarships from this endowment. The other is that donations and growth have remained flat during the recession.

**Student-Learning Outcome 1.** Majors will demonstrate critical thinking through completion of the senior thesis.

Assessment Methods: Critical thinking will be assessed by the quality and sophistication of the written thesis as well as the required department oral presentation. Also, we will track the number of student presentations at the local, state, regional and national levels and we will monitor critical-thinking ability by the results of the California Critical Thinking Skills Test (CCTST).

Results: As of May 2011, 54 Geosciences students have submitted theses that have resulted in 29 presentations at regional or national scientific meetings. CCTST results from 2007-2011 range from 17.0-18.9; the national average for the same time was 16.8.

**Student-Learning Outcome 2.** Graduates will achieve a passing score on the department exit exam.

Assessment Methods: Exit exams for graduating seniors will be graded as pass/fail, where ≥65 is a passing score.

Results: Since 2006, 46 students have completed the department exit exam. About 70% of these students achieved a passing grade—a value that has remained relatively constant over the years.

**Summary of Key Program Improvements:**

1. Aggressive recruitment of new majors. Geoscience enrollment has increased 161% from 2006-2010. The current number of majors (68) is the largest since 1983. This higher enrollment removed the geoscience program from the TBR list of monitored, low-producing programs.
2. Development of the Geography concentration in 2007. This has increased enrollment in the geosciences by up to five.

3. Development of a department exit exam to assess content knowledge of graduating seniors. The results of the exams have illuminated weaknesses in the curriculum, particularly with map reading, rocks and minerals. To help remedy this, the department created a new required course (GEOL 2500, Geologic Fundamentals) in 2008. We continue to monitor exam results to identify weaknesses in the program.

4. The development of GEOL 1020 (Field Experiences in the Geosciences), GEOG 1110 (World Geography), and GEOG 1130 (Geography of Natural Hazards—a general education course) have helped recruit new students and boost SCHs from 1,487 in fall 2005 to 2,270 in fall 2011; GEOL 2500 (Geologic Fundamentals) has helped to address weaknesses in the program identified by our exit exam.

5. Implementation of suggestions stemming from a successful department external review in 2009. This included changing the emphasis in GEOL 1045 (Earth Environment, Resources, and Society) to reflect the impacts of climate change and the future importance of alternate energy. Also, it was suggested that we expand the appeal of environmental geology across campus. This was accomplished, in part, by the department’s involvement with the new ESS program beginning in 2012 and the proposed PSM program in environmental informatics.

6. More online courses. The number of online courses offered during the semester and summer has grown to five. Two of these courses are general education courses (GEOG 1120 and 1130).