

**COUNCIL ON PROGRAM REVIEWS**  
Summary Report  
**DEPARTMENT OF GEOLOGY AND GEOPHYSICS**

## Background

The Department of Geology and Geophysics was established in 1955 in the College of Arts and Sciences. It is now part of the School of Ocean and Earth Science and Technology (SOEST) as one of their charter members. The present staff includes 19 tenure line faculty, two faculty specialists, and a part-time instructor. The Department is housed in the Pacific Ocean Science and Technology Building, one of the newer facilities on campus. The analytical and research laboratories are well equipped with both computers and highly specialized technology for the special types of analyses required in the discipline. Students interested in Geology and Geophysics can pursue four degrees: the BA, BS, MS and PhD. Emphasis is on the graduate program as there are 60 graduate students and 30 undergraduate majors. Undergraduate advising is handled by a specialist in the SOEST office.

## Findings

This is a highly productive and successful department, competing on the national and international level for research grants and top level graduate students. The facilities and technology are nearly state of the art. A recent loss of four faculty and a specialist was quickly remedied by the hiring of replacement faculty all of whom will be on board within the coming 10 months. All of the newly or soon to be hired faculty were the program's first or second choice. A concern identified by the review team was a lack of diversity as the faculty is almost entirely male. Efforts have been made to recruit female faculty, but the discipline tends to be male dominated. Another concern with the faculty is that there are relatively few junior faculty.

Both graduate and undergraduate students generally are satisfied with the program. The Council, however, observed that a majority of the undergraduate BS majors aspire to attend graduate school at UHM while very few, in fact, are admitted into any graduate program including UHM, which is very competitive. The council is concerned about these unrealistic expectations. The BS students are often ill prepared for graduate study in Geology and Geophysics. The Department explains this in terms of the students' lack of skills in math and science at the high school level. Most of the majors are local students. Some members of the Council believe that both responsibility for preparation and for giving students a realistic picture of their own future prospects lies in the Department. The Department needs to determine its objectives for the undergraduate programs. If one objective is to prepare students for graduate work the department should set in motion a program to better prepare those undergraduates for graduate study. One suggested mechanism is to increase the opportunity for undergraduates to conduct research under faculty mentors. Concern was expressed by the review team over the need for technical support and assistance in maintaining the equipment. There is also an insufficient number of teaching assistantships in the Department, meaning that faculty often must teach lab sections of undergraduate courses.

## Recommendations

1. The Council recommends that the Department do more to prepare their undergraduates for graduate study. Once the department has determined the objectives of its undergraduate programs, the department needs to put in place an advising system which provides realistic expectations for admission to graduate levels at the University of Hawai`i at Mānoa.
2. The Department needs continued attention to increasing faculty diversity and a written plan to accomplish this important task.
3. The Dean and the Department need develop a clear understanding of the utilization of positions and funds to determine whether teaching assistantships deserve a higher priority in the allocation of resources.
4. The Council recommends that the Department implement a regular process of assessing the quality of their degrees and student learning outcomes. The Department should address progress on their assessment program in the one-year report following this review.