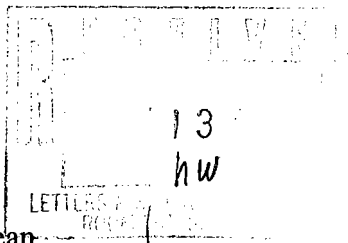


Thursday, May 13, 1999

TO: Herb Wang, Associate Dean

FROM: John Valley, Chair



RE: DEPARTMENT OF GEOLOGY AND GEOPHYSICS
GRADUATE ASSESSMENT REPORT

Enclosed is the Department of Geology and Geophysics Graduate Assessment Report approved by the faculty yesterday. The data in this report is summarized from tables available upon request.

DEPARTMENT OF GEOLOGY AND GEOPHYSICS GRADUATE ASSESSMENT REPORT

Abstract

Because of sub-specialization at the graduate level within the field of geology and geophysics, there are no department-wide norms or skills to evaluate. We do have general outcome expectations, however. An M.S. graduate of the department should be able to function as a professional geologist. A Ph.D. graduate should be able to function as an independent scientist, capable of recognizing and evaluating geologic problems and of initiating research programs to investigate them. In short, the quality of our graduate program hinges on the employability of our graduates. Employment, advancement, and recognition of the graduates are indirect measures of how well they are prepared.

Between 1989 and 1998, the department awarded 55 Ph.D. and 98 M.S. degrees. 44% of our Ph.D. students went to teach at other academic institutions, 33% to industry, 16% to government, and 7% are in non-geology related areas. A large percentage (41%) of our M.S. students went on to Ph.D. programs, while 32% went to industry, 13% to government, 8% are working in areas outside geology, and 6% went to work at academic institutions. Over the last 10 years, the 153 graduates have been competing well in the job market, reflecting their preparation.

Introduction

The Department of Geology and Geophysics does research and disseminates information on the structure, chemistry dynamics and evolution of the Earth, life on Earth, and the interactions between physical, chemical, and biological processes. We strive for breadth and excellence in our coverage of the subdisciplines within geology. We believe that research and the creation of new knowledge is intimately inter-related with, and essential to, our graduate studies program. Our department is well represented in a broad range of research disciplines across all of the major areas of geosciences. As such, there is a large diversity of sub-specialization at the graduate-level, with no common courses or capstone course(s) taken by all graduate students.

All the M.S. students complete a thesis that is defended in public. Most students also make public presentations at national or international meetings. The department encourages this participation by facilitating support to attend the meetings. M.S. students have different courses to take according to their main discipline. Ph.D. students, in addition to course work in geology or geophysics, have to complete a minor (10 cr. outside of major course work) and a language requirement. Prior to completing their dissertation, all the Ph.D. students have a preliminary exam. Some sub-disciplines require a comprehensive exam, but it is not required across the department. Ph.D. students make a public presentation of their work in the department, and are also encouraged to present their work at national and international meetings as well as publish their work.

Since 1882, the department has graduated 1481 graduate students (956 M.S., M.A. and M.Ph.'s, and 525 Ph.D.'s). The American Geological Institute recently ranked UW-Madison third in the nation (behind Stanford University and University of Texas at Austin) in production of M.S. and Ph.D. graduates. US News & World Report ranked the graduate program as 17th in the nation, and ranked graduate specialty programs in hydrogeology and sedimentology-stratigraphy as 3rd and 6th in the nation, respectively. Most of the living alumni keep in touch with the department and changes in their addresses and professional career are regularly listed in the department's Newsletter and Outcrop

(alumni directory). Alumni involvement in the department occurs through an active Alumni Board and gifts to the department.

Assessment

The principal tool the department used in the assessment of the graduate program was the success of our graduate students after completing their thesis. Table 1 shows the number of degrees awarded in the last 10 years (1989-1998) and their current status.

Table 1 Degrees and employment data period 1989-1998

Ph.D. completed	55 = 36%
M.S. completed	98 = 64%
TOTAL DEGREES	153
M.S. who went to Ph.D. programs	40 = 41%
M.S. who went to industry	31 = 32%
M.S. who went to government	13 = 13%
M.S. working non-geology related jobs	8 = 8%
M.S. who went to academic institutions	6 = 6%
Ph.D. who went to academic institutions	24 = 44%
Ph.D. who went to industry	18 = 33%
Ph.D. who went to government	9 = 16%
Ph.D. working non-geology related jobs	4 = 7%

The department strives to recruit a diverse group of students from throughout the US and internationally. From 1989-95, the percentage of female students graduated with a M.S. or a Ph.D. was 30% and 24%, respectively, slightly higher than the national average for the same period (28% and 21% respectively, AGI).

Another indirect measure of our graduate program is our success in recruiting students. For the period between 1989-1998, 44% of all the offers (all categories included) were accepted. The largest percentage of students that did not accept our offers went to the following five institutions: Stanford, U of Arizona, U of Michigan, U Washington, and U Texas-Austin.

In summary, the employment data and indirect measurements indicate a strong and successful graduate program. A possible area to improve is in having a similar set of requirements for all the Ph.D. students in the department.