



NORTHERN ILLINOIS UNIVERSITY

College of Liberal Arts and Sciences

Department of Geology and Environmental Geosciences

PH.D. PROGRAM GEOLOGY: DEPARTMENT OF GEOLOGY AND ENVIRONMENTAL GEOSCIENCES 2004

ASSESSMENT PLAN.

Assessment of student learning and outcomes in the Ph.D. program of the Department of Geology and Environmental Geosciences is achieved via several mechanisms. Firstly, the best and most continuous assessment is built into the Ph.D. program through the one-to-one advising and mentoring relationship between a Ph.D. student and his or her advisor. Periodically, the Graduate Director or the Departmental Chair meets with the graduate students, either individually or in groups, to discuss their progress and to solicit their perspectives on the strengths and weaknesses of the curriculum and the program. Also periodically, the department conducts a comprehensive survey of alumni to gather information about their satisfaction with the Ph.D. program, including courses, faculty, facilities, and program structure. On a more regular basis, we include a departmental questionnaire with the university's annual survey of alumni. The ultimate assessment of a program is the career records of its graduates. In this respect, the department tracks all alumni, noting their first and subsequent career positions. Informally, feedback received from employers reflects on our graduates and indirectly on our program.

Another very important part of program assessment involves efforts to determine and keep current with best practices. This is achieved utilizing a multi-pronged approach. As mentioned above, we regularly ask our alumni to tell us which courses or aspects of the program were most useful and which were least useful in their career. We also keep in constant contact with employers to hear what they have to say about our graduates and what they feel are important components of a geoscience curriculum. In addition, we regularly monitor what other geoscience departments in the state and in the nation are offering, and we consider formal recommendations from special committees or commissions consisting of representatives of industry, government, and academia, such as the formal curricular recommendations of a committee assembled by the industry-focused American Association of Petroleum Geologists (AAPG). Finally, with a faculty actively engaged in research and in collaborations with colleagues around the country and the world, the department is in an excellent position to know what a relevant curriculum is.

Nevertheless, there are also several more formal assessment activities within the program itself:

1. Entry-level assessment of student background and curricular needs.
2. In-program annual assessment of progress.
3. In-program assessment by testing.
4. Teaching evaluations.
5. Exit assessment based on presentation of research results.

1. Entry-level assessment of student background and curricular needs. Admission to the program is based on GPA, GRE scores, letters of recommendation, and related information, which may reveal a gap in the student's preparation that results in admission with one or more specified deficiencies that must be removed before completion of the program. In addition, students are interviewed by a faculty committee in the week before the student's first semester to see if there are gaps in the core of knowledge that all Ph.D. students should possess. If areas of weakness are identified, the faculty committee specifies the means for rectifying the weakness, usually in the form of specific course work.
2. In-program annual assessment of progress. Ph.D. students are required to have an annual assessment of their research and program progress by their faculty committee. In this way progress is monitored and adjustments are made. Students are encouraged to meet even more frequently with their committee if possible.
3. In-program assessment by testing. All Geology and Environmental Geosciences Ph.D. students are expected to reach a certain general level of competency in the geosciences. Students who enter the Ph.D. program directly from the baccalaureate level must pass the M.S. non-thesis comprehensive examination. Additionally, Ph.D. students must take a specialized candidacy examination.
4. Teaching evaluations. An indirect form of assessment emerges from teaching evaluations. Ph.D. students serving as laboratory teaching assistants or lecturers are evaluated by the undergraduate students in their sections. The Ph.D. students receive these evaluations in order to facilitate improvement of their own teaching, and the evaluations serve as an assessment of the teaching skills and discipline knowledge of the Ph.D. student.
5. Exit assessment based on presentation of research results. The Ph.D. is a research degree, and the final assessment of each student's professional competence is the defense of the doctoral dissertation. The student is also encouraged to present in-progress and completed research in various public forums, ranging from a presentation at a department colloquium to national professional meetings. At least one such presentation is a program requirement. Such activities indicate both how well the department is fulfilling its program goals of teaching and research and how well the individual student is progressing.