

# Doctor of Philosophy in Geosciences

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## Brief Description

The Ph.D. program in geosciences is offered to those students who have demonstrated strong aptitude for research and scholarly activity. Research can be conducted in any field of the geosciences in which ISU faculty have expertise. The student's course of study will be determined in consultation with his or her advisor and doctoral committee. Continued enrollment in the program is contingent upon maintaining a 3.0 grade point average and making satisfactory progress toward the degree. In order to complete the research and prepare the dissertation, the program normally requires at least four years of full-time study beyond the master's degree. In some cases, students without an appropriate M.S. degree but demonstrating an exceptional undergraduate academic record and aptitude for research may be directly admitted to the Ph.D. program.

## Admission Requirements

All applicants must meet Idaho State University Graduate School admission requirements for doctoral programs. In addition, applicants must have attained a minimum of a bachelor's degree in geosciences or a closely related field (environmental science, physics, engineering, chemistry, biology, etc.) and have maintained at least a 3.0 GPA in their previous degree(s) unless special circumstances are demonstrated.

A complete graduate application for classified status in the Idaho State University Geosciences Department Ph.D. program consists of:

1. An Idaho State University Graduate School application form, fee, and official copies of transcripts;
2. Three letters of recommendation; and
3. A statement outlining the student's motivation for graduate school and their longer term career goals.

## General and Course Requirements

The doctoral degree requires completion of at least 84 graduate credits. Of these, at least 32 credits must be doctoral dissertation credits (GEOL 8850 (<http://coursecat.isu.edu/search/?P=GEOL%208850>)) and another 35 credits must come from coursework at the graduate level, two to four of which must be a graduate seminar. Of the total 84 credits, at least 40 must be taken from the ISU Department of Geosciences. Pre-Thesis credits (GEOL 6649 (<http://coursecat.isu.edu/search/?P=GEOL%206649>)) are not included in the credits counted toward the degree. Students entering the program with a master's degree may receive credit for up to 30 credits toward the doctorate, split between dissertation and coursework as appropriate, subject to the department chair's approval. Classes and seminars may be taken at, or in collaboration with, Boise State University and/or the University of Idaho. Students may be required to complete any missing course material that is required for the B.S. degree in geosciences at Idaho State University.

## Program of Study

An initial Doctoral Committee of at least three, composed of the candidate's major professor (committee chair) and two graduate faculty will guide each student in establishing his or her program of study based upon the student's background and research interests. The majority of any committee must consist of graduate faculty from the ISU Department of Geosciences. It is the responsibility of the initial Doctoral Committee chair to arrange the first meeting. The committee has the responsibility of ensuring that the student has adequate knowledge in his or her area of research. The initial Doctoral Committee should be assembled early in the candidate's program to discuss the process, timeline,

and recommendations for the Program of Study and the Written Qualifying Exam.

During the third semester, the student is allowed two attempts to pass the Written Qualifying Exam. The student will be admitted to candidacy upon passing. Following passing, the full-time candidate, with guidance from the major professor, will assemble their final Doctoral Committee. This committee is composed of at least five, inclusive of the candidate's major professor, at least three graduate faculty, and a Graduate Faculty Representative (GFR). The majority of any committee must consist of graduate faculty from the ISU Department of Geosciences.

By the end of the fourth semester, under the supervision of the final Doctoral Committee, the doctoral candidate will also have completed a satisfactory research Prospectus and passed an Oral Prospectus Defense. Exceptions to this schedule may be made when a student has academic deficits to make up, in which case the student may be granted an additional year.

The research and dissertation preparation must be done under the close supervision of the final Doctoral Committee and must include at least one full year of work performed under the supervision of Idaho State University graduate faculty. The dissertation must demonstrate the student's ability in independent investigation and must be a contribution to scientific knowledge. It must display mastery of the literature of the subject field and must demonstrate an organized, coherent development of ideas, with a clear exposition of results and a creative discussion of the conclusions.

Dissertation approval requires a public presentation of the dissertation and a satisfactory oral defense to the final Doctoral Committee. The oral defense is open to all regular members of the graduate faculty as observers. Further, oral presentations are open to the public until the oral defense begins. Additional details regarding the graduate timeline are available on the ISU Department of Geosciences website.

## Doctor of Philosophy in Engineering and Applied Science

A doctoral program in Engineering and Applied Science, administered through the College of Science and Engineering, is available to geoscience students. The complete program description is provided in the Engineering and Applied Science (<https://coursecat.isu.edu/graduate/scienceengineering/engineeringandappliedscience/>) section of the Graduate Catalog.