Program Requirements and Graduate Student Assessment

Department of Earth and Space Sciences

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Graduate Program Advising

An advisor and two faculty members will be appointed by the Graduate Program Advisor to form an Advisory Committee for each student on entry to the graduate program, based on the student's interests and the faculty's expertise and availability. The new student should meet with his/her committee soon after arrival to set up a first-year curriculum appropriate to his/her individual needs. Regular discussions should take place between the student and his/her advisor. The full Committee should meet with the student at least once during the first year to assess the student's progress and plans. Note: Since the initial matching of student and advisor is based on limited information, changing advisors may be appropriate in certain cases. Any student who is considering changing advisors must consult with the Graduate Program Advisor.

Each year at the end of fall quarter, all new and continuing graduate students are required to prepare and submit an "Annual Progress Update" form. This document is prepared by the student in consultation with the student's adviser and includes the student's Financial Aid Request for the following academic year. This financial aid request applies only to fall-winter-spring quarters. Financial support for summer is negotiated directly between student and advisor. A very limited number of Summer TA positions may be available. An announcement of Summer TA positions will occur in Spring. Any Graduate School RA's and, with rare exceptions, any Department Fellowship/RA awards must also be used during Fall, Winter or Spring quarters.

Graduate Program Requirements

As the Department of Earth and Space Sciences encourages interdisciplinary courses of study tailored to each student, there are few formal requirements for the M.S. or Ph.D. degrees beyond those specified by the Graduate School.

Students should familiarize themselves with the Graduate School requirements and procedures online at http://www.grad.washington.edu/area/currstuds.htm and the checklist at http://www.grad.washington.edu/stsv/quickref.htm.

In addition, departmental requirements for graduate students in both geological sciences and geophysics include:

- Courses determined in consultation with the student's advisory committee to insure both depth and breadth
- ESS 594 Introduction to ESS Research, each quarter of the first year
- ESS 599 ESS Seminar, every quarter (except summer)
- Prelim Exam (see below)

Additional information from the department can be found online at the "old" Student Guide sites for geological sciences and geophysics, which will be phased out as the graduate program is revised. These are located at: http://www.geophys.washington.edu/Program/StudentInfo/studentguide.html and http://www.ess.washington.edu/geology/GradProgram/GradGuide.html.

The Student Services Office also serves as a resource for students at advising@ess.washington.edu.

The Prelim Exam

Purpose

The Prelim Exam is a requirement of ESS for every graduate student in its program. *It is only one component* of the information the Department uses to evaluate admission to the Ph.D. program early in the second year of a student's graduate program. Along with the first-year research seminar sequence, the Prelim Exam is used to encourage students to learn how to develop and present a research project, and get an early, structured start on graduate research.

For the Prelim Exam a graduate student must demonstrate:

- Ability to think critically, logically and creatively and to communicate effectively
- Knowledge of the disciplines that underlie the student's general area of interest (e.g., geology, geophysics, physics, math, chemistry, biology, etc.)

All entering graduate students (both M.S. and Ph.D.) must present and defend a Research Proposal before a Student Evaluation Committee (SEC) at the end of their first year or at the beginning of their second year in the Department of Earth and Space Sciences. Prelim Exam dates are established by the department and communicated to students in advance. Fall exam dates will be the week prior to the beginning of Autumn Quarter. The Committee will consist of two co-chairs, four additional faculty members and two student observers. The Committee assigned to each individual student will consist of one of the co-Chairs, two of the other faculty members, the student's advisor(s) and one of the student observers. An important role of the co-Chairs and the student observers is to provide calibration among exams and an overview of the relative quality and fairness of exams among the students.

Student preparation for the exam during the first year should involve:

- Significant faculty research mentorship
- Projects and oral presentations in courses
- Presentations by first year students in a Spring Quarter seminar (ESS 594)
- Practice Proposal Defenses conducted by students

Documents required:
Two weeks prior to the defense date, students are required to submit (or oversee submission) all of the following items to the Student Services Office:

- A letter of evaluation and support by the student's advisor(s) that evaluates the student's progress to date and his/her potential for completing a graduate degree here. The letter should specifically address performance in graduate level classes, and the results of consultation with instructors of those classes for which the student's performance was not satisfactory. The letter should be addressed to the Student Evaluation Committee with one copy sent to Student Services and one once copy to the student.
- One unofficial copy of the student's transcripts showing coursework taken to date at the University of Washington. UW Transcripts can be printed out from "MyUW" or picked up at the Gateway Center in Mary Gates Hall.
- The student must submit five copies of the Research Proposal to Student Services, for distribution to the Committee. (See information below on preparation of the Proposal.)

Structure of the Prelim Exam
Immediately prior to the Exam, the SEC will meet with the student's advisor to briefly review the student's first year of graduate work and the relation of the proposal to planned thesis research.

The oral presentation part of the Exam will then begin and is open to all members of the Department. A schedule of all exams will be posted. This part of the exam will start with a fifteen-minute presentation by the student.

The general audience will have an opportunity to ask a few questions, and then all are excused except the SEC, advisor and student for further questions.

Committee questions may address both the specifics of the Proposal and the fundamentals underlying the general area of the Research.

After completion of the exam, the student is excused, and the SEC (including the graduate student representative) and the student's advisor discuss the results and develop any recommendations.

The advisor and graduate student representative are then excused and the remaining committee members vote on the outcome. The outcome is based on 1) student's ability to pose and write a research problem, 2) presentation of the research problem, 3) ability to reason through complex questions during discussion, and 4) appropriateness of

background knowledge.

The student's advisor is encouraged to promptly communicate to the student the recommendations and evaluations made during the discussion following the exam. The official results are communicated to the student after the Department votes on admission to the ESS graduate program in Executive Session of a faculty meeting, based on the SEC's recommendation. This recommendation incorporates 1) the results of the Prelim Exam, 2) the student's first year class performance, 3) definition of a research direction, 4) written and verbal evaluation by the student's advisor, and 5) any other relevant information.

Possible Outcomes of the Proposal Defense

- Admission to the Ph.D. Program: student has the option to pursue an M.S., Ph.D. or both
- Conditional continuation subject to retaking the Prelim Exam and/or specific requirements set by the SEC
- Pass at the Masters level: student may continue to pursue an M.S.; students wishing to continue towards a Ph.D. must be reviewed and passed by the SEC on the basis of subsequent coursework, research and quality of MS thesis.
- Failure

Re-Taking the Prelim Exam
Repeating the Prelim Exam is sometimes allowed, but only if faculty evaluation concludes that the student's overall progress is sufficient. Dates for repeated examinations will be determined by the SEC and the student's advisor.

How to Prepare the Research Proposal and Defense

The student will prepare a maximum three page single-spaced written statement of the Research Proposal, to be submitted to Student Services at least two weeks prior to the Prelim Exam. Pages of figures will be in addition to the maximum of three. Proposals should begin with a concise statement of a tractable research goal. This should be followed by a brief review of the important background and a short discussion of the analytical approach.

The topic of the Research Proposal should be limited in scope; it should not be confused with the Ph.D. Dissertation proposal presented by students at their University Ph.D. General Exam. The topic of the Proposal could be new to the student, be an extension of previous experience or be pursued in future research. The independent formulation of Research Proposals by students is encouraged, but interaction with others, such as the student's advisor, is not limited.

After the Prelim Exam

Students who pass at the Master's level may proceed to complete their Master's degree. Procedures information is online at: http://www.grad.washington.edu/stsv/mastersinfo.htm. The student and advisor will determine the members of the Master's advisory committee, and the date of the Master's defense. The student will contact Student Services regarding room reservations and notifications.

Students who are admitted to the Ph.D. program may proceed to complete their doctoral degree. The next steps include setting up the doctoral advisory committee, the General Exam, setting up the reading committee, the Final Exam or Defense, and completion of the Dissertation. Procedures information from the Graduation School is online at http://www.grad.washington.edu/area/currstuds.htm.