



**THE UNIVERSITY OF VERMONT
THE RUBENSTEIN SCHOOL OF ENVIRONMENT AND NATURAL RESOURCES**

PH.D. GUIDELINES

Approved by the RSENR Faculty

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Revised with approval by the RSENR Faculty

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These Ph.D. Program Guidelines were generated by The Rubenstein School of Environment and Natural Resource (RSENR) Graduate Standards Committee and reviewed by RSENR faculty during the 1995/1996 academic year. Faculty input is recorded in the minutes from RSENR faculty meetings (11/28/95; 4/16/96; 4/30/96). They were revised in May 1998 to include sections on the suggested schedule for completion and review of progress, and again in 2011 to refine information about the Teaching/Professional Skills and Cross-Cultural requirements and to clarify graduate student committee composition.

I. Purpose, Philosophy, and Scope

The doctoral degree program gives students the opportunity to achieve a high level of scholarly competence and to develop the capacity to contribute knowledge to their field. This document addresses the guidelines specific to The Rubenstein School of Environment and Natural Resources for forming a committee, teaching experience, cross-cultural experience, the dissertation proposal, comprehensive examinations, and the dissertation defense. These guidelines provide common levels of understanding and expectations for both the students and the faculty of the Ph.D. Program.

These program guidelines are in addition to, but do not supersede, the General Requirements for the Degree of Doctor of Philosophy outlined in the University of Vermont Graduate Catalogue. The Graduate Catalogue outlines student rights and responsibilities and describes models for advising. In addition, faculty advisor responsibilities are addressed in The Rubenstein School of Environment and Natural Resources' Faculty Standards. The student, with written support from her/his advisor, may request exceptions to any of the provisions described below. These requests should be submitted to the Graduate Standards Committee for review and ruling.

II. Forming a Committee

The student in consultation with her/his advisor will propose a Studies/Dissertation Committee. *This can be a single committee that oversees both the Studies (comprehensive examination) and Dissertation research or can be two separate committees.* The advisor serves as chairperson of the committee(s), except for purposes of the oral comprehensive examination and the Dissertation Defense Examination. During these exams, a graduate faculty member from outside of RSENR will serve as chairperson. The committee should be formed during the first semester of the student's program. The composition of the committee should be as follows:

- Advisor must be inside school AND a member of the Graduate Faculty
- Chair must be outside member AND a member of the Graduate Faculty
- Two other members must be members of the Graduate Faculty (four total on UVM Graduate Faculty)
- Two members must be Graduate Faculty members of the Rubenstein School.

Final approval of the committee is the responsibility of the Graduate Program Coordinator. The University of Vermont Graduate Catalogue outlines committee requirements for Ph.D. students under the General Requirements for the Degree of Doctor of Philosophy.

Ph.D. Guidelines

III. Teaching and Professional Skills Requirement

Ph.D. students may meet the Teaching and Professional Skills Requirement with one of two options: Teaching or Professional Skills.

(i) Teaching Option:

In this option, students who anticipate teaching in a college or university setting have the opportunity to conduct mentored teaching in a RSENR course. Through this experience, students will have an opportunity to improve communication skills, gain important career experience, and learn through teaching. Students who elect this option will (a) participate in and successfully complete a 2-credit course in university teaching (NR 376); **and** (b) work with a faculty mentor to teach a significant portion of an RSENR course.

For the teaching experience (b), a student may (b.1) co-teach at least the equivalent of 1 credit of a course in his or her discipline with a faculty member who normally teaches that course; (b.2) develop and teach, with mentoring, an advanced special topics undergraduate course; or (b.3) teach a full course. The first option includes introductory or advanced courses, but normally not RSENR core courses. The teaching experience should involve all aspects of university teaching: designing subject matter, developing course content, delivering lectures, interacting with students, designing assignments and tests, and grading. Students will work closely with their faculty mentors to develop course materials, and will meet regularly with mentors to review and critique their teaching. Students also will attend lectures given by faculty mentors, throughout all or most of the course, as part of the learning experience. A one credit course equivalent, for example, would include 1/3 of all course requirements (i.e. lectures, assignments, labs) for a 3-credit course. All teaching and mentoring assignments must be pre-approved by the Graduate Standards Committee as part of the student's Teaching Plan proposal and any salary provided for teaching will be at the discretion of the Dean.

Students will need to plan their teaching experience in advance. Ideally, students should participate in the university teaching course during the semester before or during their teaching experience. Students will submit, in advance, their Teaching Plan proposal for fulfillment of this requirement to the Graduate Standards Committee to receive signed approval; this should be done by March 1 for the fall semester, or by October 1 for the spring semester. Students will work with their faculty mentors to develop written expectations prior to, and evaluations after, their teaching experiences. Students will work with faculty mentors who are experienced teachers who have taught 3 or more courses. Students will be evaluated during their teaching experiences by the mentoring faculty members, and by student evaluations. Student grades will be determined by the instructor and faculty mentor of the course. Ph.D. instructors may only assign grades to undergraduate students. **Final reports** submitted by the student to the Graduate Standards Committee must include: 1) a final course syllabus, 2) a detailed description of the student's role and activities in the course, and 3) two faculty evaluations of the student's teaching. Any change in course, mentor, or any other aspect of the Teaching Plan must be pre-approved by the Graduate Standards Committee.

(ii) Professional Skills Option:

In this option, students must demonstrate that they have the skills necessary to work as an environmental professional outside of academia or government, such as in an environmentally focused business or nonprofit organization. Thus the student must present more than just the scholarly work expected of an accomplished PhD student or academic scientist. Students may take a 2-credit course in professional skills (if available) that will provide training in grant development and management, presentation of professional talks, preparation, submission, revision, and review of manuscripts, communication with the public, and related material.

In lieu of the 2-credit course, students may petition the Graduate Standards Committee to meet this requirement by presenting specific documentation that demonstrates their work/proficiency with client solicitation/marketing, proposal preparation, presentations to clients, budget management, project reporting, and paper writing. Materials provided to the GSC should include (a) a cover letter that describes their work in the professional arena, and (b) representative examples from each of the five following categories:

- (1) an actual proposal submitted to a client detailing how a specific project would be accomplished, including a presentation of the budget required;
- (2) evidence of budget management and/or the completion of a project within budget;
- (3) a copy of a presentation to a client;
- (4) a polished final report written for a client; and
- (5) a scholarly or other article (professional paper or piece for the public) written based on a project, or another secondary product such as a finished website.

This list is not meant to be exclusive – other documentation of competency might be substituted based on the judgment of the Graduate Standards Committee.

IV. Cross-Cultural Experience Requirement

Through cross-cultural experience, students have the opportunity to expand their understanding and appreciation of diversity issues, and engender in themselves the strength to listen to, and respect, voices and ideas different from their own. Each student is expected to document a cross-cultural educational experience. There are four options for completion:

- (1) a multicultural living and working experience of at least three months duration;
- (2) co-teaching a discussion group for NR 06 and taking responsibility for development of a particular aspect of the course; or
- (3) successful completion of NR 306.
- (4) a foreign language ability comparable to two years of college-level course work as an undergraduate or graduate student. The language experience may also be fulfilled by a language examination administered in conjunction with the appropriate language department (see Graduate Catalogue, Language Requirement).

The student is required to submit a written account of the appropriate materials (e.g., transcripts) to the Graduate Standards Committee for approval.

V. The Dissertation Proposal

The dissertation proposal is written to establish the scope and context of the student's expected research project. This project is a scholarly contribution to knowledge in the student's area of specialization. The proposal will, at minimum, address the relevant literature, research question(s), methods, and expected contribution to the field.

A. Proposal Seminar to School

Students will give a seminar to the School on their proposed research. This seminar is to be presented before the student's committee approves the formal research proposal.

B. Proposal Approval by Committee

The Studies/Dissertation Committee will review and approve the dissertation proposal. Frequently, preliminary research is necessary to fully develop the dissertation project. Recognizing this, the proposal, seminar, and subsequent approval by the committee should precede the substantive portion of the student's research. The dissertation proposal may be submitted before or after completion of the comprehensive exams, depending on the guidance of the Studies/Dissertation Committee. The advisor will submit documentation of approval to the Graduate Standards Committee for placement in the student's file.

VI. Comprehensive Examinations

The purpose of the examinations is to provide the student with an opportunity to demonstrate her/his depth and breadth of knowledge. The preparation and administration of the examination is the responsibility of the Studies/Dissertation Committee. The examination consists of a four-part written exam and an oral exam. It should be taken and passed during the second year of matriculation. The Graduate College requirement stipulates that the examination must occur at least six months before the dissertation is submitted.

A. Written Exam

The written exam will test students in four subject areas: philosophy of science, theory in the area of specialization, methods in area of specialization, and integration across the breadth of Natural Resources, to incorporate social, natural, and physical dimensions. The chairperson of the committee will be responsible for ensuring that each of the four areas is covered in the questions posed by committee members. The student must pass the written exam within two tries.

1. Conduct of the Exam

The chairperson of the committee, in consultation with the student and committee members, shall select one of the following two options for the written portion of the comprehensive examination:

Option 1. The exam will be conducted over two consecutive days with a maximum of seven hours per day. It is expected that this will be a closed-book, closed-door format, and will be administered in a quiet place, conducive to good work, agreeable to the student and the advisor.

Option 2. The number of days available to complete the exam will be specified by the committee. In no case will the exam period be less than two days or more than seven days. In this option, committee members specify whether the student will have access to outside materials (books, lecture notes, articles, reading notes, etc.) for developing responses. Committee members are encouraged to specify a maximum page length for answers to each question. To encourage succinct and focused writing, answers for any particular question may not exceed 10 double-spaced typewritten pages per committee member.

2. Grading of the Exam

Each subject area will be graded pass/fail by the examiner(s) who wrote the question(s). Questions not graded within 10 days after the exam will be assumed passed. All areas must be passed to pass the written portion of the exams.

A second and final written exam is permissible. The second exam will only address the areas previously failed, and must take place within six months of the date of the first exam. If the second exam is failed the student may file an appeal with the Graduate Standards Committee

who will make a recommendation to the Dean or Associate Dean. The Dean or Associate Dean will make a determination regarding the student's status in the program.

A copy of the graded exam(s) will be kept on file and will be available to the Graduate Faculty of the School.

B. Oral Portion

The oral exam shall focus on the subject areas from the written exam, particularly any weak areas. The underlying intent shall be to examine the student's ability to think and expound on her/his feet. Therefore, questions need not be limited to the originally designated subject areas, but may include knowledge essential to complete understanding of information in their field of study.

1. Scheduling and Announcement

The oral exam shall occur within one year after passing the written exam and should be scheduled during times when the University is open (i.e., during working hours on weekdays) and should not be scheduled on holidays or religious holy days. It will be announced at least two weeks in advance of the event. The announcement shall contain the student's name, place, and time of the oral exam, names of committee members, and the designated chairperson of the exam (see below, 2. Conduct of the Exam). This announcement shall be distributed to all Graduate Faculty in RSENr.

While this is expected to be a closed exam, any RSENr Graduate Faculty member can attend the oral exam, providing that both the advisor and student are given one day's advance notice.

2. Conduct of the Exam

The chairperson for the oral exam shall be a member of the Studies/Dissertation Committee and a Graduate Faculty Member from outside the School. The recommended length is two hours to a maximum of three hours.

The chairperson has the responsibility for ensuring proper conduct of the examination. The advisor is responsible for documenting and communicating the results to the Graduate Standards Committee and the file.

When questioning is completed, the student and any guest Graduate Faculty will be excused. An initial straw vote should be taken followed by discussion. The final vote will be oral. Each member of the committee votes either pass or fail. If there is one fail vote the student passes, if there are two or more fail votes the student fails the exam. The student will be informed verbally of the result as soon as it is reached.

If the student failed the first oral exam, the committee must inform the student of the reasons for failure and suggest source materials for improvement. The second exam shall be announced and conducted in the same manner as the first. The student in consultation with the committee shall determine the appropriate time for the next oral examination. In all cases, the second oral exam must be taken within three months of the first.

After passing the oral examination, the Graduate Program Coordinator sends a form to the Graduate School announcing the student can be advanced to candidacy.

VII. Dissertation Seminar and Defense Examination

The purpose of the Dissertation Seminar is to share with the academic community the findings of the dissertation research. The Defense Examination provides the student and committee with the opportunity to have a wide-ranging and in-depth discussion about the nature of the research and its implications.

The student will present a seminar on her/his dissertation research. Immediately following the seminar, she/he will defend it before their Studies/Dissertation Committee. As outlined in the University of Vermont Graduate Catalogue, the seminar and defense will take place a minimum of two weeks after the Graduate College format/record check. The dissertation must be submitted to members of the committee at least two weeks prior to the scheduled seminar and defense examination.

A. Dissertation Seminar

Students will present their research in a dissertation seminar open to the public. The student will post an announcement, including an abstract and names of committee members, at least two weeks in advance of the seminar. Studies/Dissertation Committee members will attend the seminar.

B. Dissertation Defense Examination

The dissertation defense tests originality, independence of thought, the ability to synthesize and interpret, and the quality of research presented. The defense concerns principles and historic perspectives, as well as discussion of the dissertation results and conclusions. Examiners often pursue lines of thought and argument from the data and concepts that have contributed to the research and its critical evaluation by the student. Students should be aware that any area failed during the comprehensive examination will be a point of focus during the Dissertation Defense Examination.

While this is expected to be a closed exam, any RSENR Graduate Faculty member can attend, providing that both the advisor and student are given one day's advance notice.

1. Conduct of the Examination

The chairperson for the examination shall be a Graduate Faculty Member from outside the School. The recommended length of the examination is two hours to a maximum of three hours.

When questioning is completed, the student will be excused and an initial straw vote should be taken followed by discussion. Final voting may be orally, or at the request of any member of the committee, by secret written ballot. Each member of the committee votes either pass or fail. If there is one fail vote the student does not pass the exam. The student will be informed verbally

of the result as soon as it is reached. The student may pass the defense, but still be required to make changes in the dissertation before it is signed in its final form.

If the student fails the examination, she/he may retake the exam one time. This second exam must occur within six months of the first. If the second exam does not occur within one month of the first defense, the student will give a second seminar in addition to taking the second defense exam. If the student fails the second exam, she/he may file an appeal following the Students' Rights and Responsibilities section of the Graduate Catalogue.

VIII. Suggested Schedule for Completion of Degree Program

Many factors influence the timing of an individual student's program. The following milestones for a full-time Ph.D. student in RSENR should be completed by the end of the identified semester or year. This schedule reflects the expectations of the Graduate Standards Committee and the RSENR faculty.

A. Schedule of Milestones

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| 1. Studies/Dissertation Committee(s) Formed | Semester 1 |
| 2. Proposal Seminar | Semester 3 or 4 |
| 3. Proposal Approval | Within one semester of Proposal Seminar |
| 4. Comprehensive Exams | |
| Written | Year 2 |
| Oral | No later than one year after written exams |
| 5. Advancement to Candidacy - Upon successful completion of Comprehensive Exams (Year 2 or 3) | |
| 6. Cross-Cultural Experience | Year 3 |
| 7. Teaching Experience | Year 3 or 4 |
| 8. Dissertation Seminar/Defense | Year 3 or 4 |

B. Evidence of Completion of Requirements

Evidence that requirements have been met shall be provided as identified in the descriptions of the requirements. Evidence that is to be provided to the Graduate Standards Committee should be submitted via the Graduate Program Administrative Support person.

C. Time Limits

The Graduate Catalogue outlines University requirements for completion of Ph.D. degree programs. The University allows all Ph.D. students nine years. Full-time Ph.D. students in RSENR are encouraged to complete all degree requirements within four years of initial enrollment.

IX. Review of Progress

Each year, the Graduate Standards Committee (GSC) will review the progress of all Ph.D. students in RSENR. The intent of the review is to provide feedback to the student to help

her/him complete the degree in a timely fashion. The GSC will review progress based on the suggested Schedule of Milestones, as well as performance in coursework (maintenance of a GPA >3.0). The GSC will make recommendations for appropriate action to the Graduate Program Coordinator (GPC). Students significantly behind schedule or not maintaining a GPA >3.0 will be contacted by the GPC as follows:

1. Student with a cumulative GPA <3.0 will be placed on academic probation.
2. Students falling in arrears of completing the requirements according to the established schedule will receive a letter from the GPC (cc: advisor). This letter will suggest that the student act as quickly as possible to correct this situation and that she/he meet with her/his advisor to discuss how to complete the requirements.
3. If a second year goes by and the previously unmet requirement is still delinquent, a second letter will be sent to the student (cc: advisor and the dean), informing all parties that the student is being placed on trial.
4. If the student remains in arrears a third time, the GPC will send a third letter, which will go to the dean or associate dean of the School (cc: student and advisor) and this letter will recommend deactivation. The dean or associate dean of the school shall notify the student and advisor of his/her decision within four weeks and notify the Graduate College regarding any recommendations for deactivation.

The GSC will entertain requests for waivers, exceptions, and variances in the above stated process at any stage, should extenuating circumstances arise. All requests should be made jointly by the advisor and student.