



**THE RUBENSTEIN SCHOOL OF ENVIRONMENT AND NATURAL RESOURCES
MASTERS GRADUATE PROGRAM & CONCENTRATION GUIDELINES
- A Student Guide to Policies and Procedures -**

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In conjunction with the Graduate College, The Rubenstein School of Environment and Natural Resources (RSENr) offers one Master's Degree (MS) Natural Resources Program with several concentrations including: Aquatic Ecology and Watershed Science; Environment, Society, and Public Affairs; Environment, Thought and Culture; Forestry; and Wildlife Biology.

REQUIREMENTS AND RESPONSIBILITIES

Admission:

General requirements for admission to the M.S. in Natural Resources are described on the Graduate College Web site under the heading "**ADMISSION PROCEDURES FOR FULL- OR PART-TIME STUDENTS**" (<http://www.uvm.edu/~gradcoll/procedures.html>)

Official Policy Statement:

The University of Vermont Graduate Catalogue is the official document stating graduate student policies, degree requirements, rights, and responsibilities for the M.S. in Natural Resources.

http://www.uvm.edu/academics/catalogue/?Page=allpolicies.php&SM=policymenu.html&category=graduate_policies

Degree Requirements for M.S. in Natural Resources:

Students must fulfill the general requirements for the Masters Degree as set forth by the Graduate College in the University Catalogue.

http://www.uvm.edu/academics/catalogue/?Page=read.php&p=/Colleges_and_Schools/Graduate_College/Requirements/Requirements_for_the_Masters_Degree&SM=collegemenu.html

Additional program requirements are established by the Graduate Faculty of The Rubenstein School for the M.S. in Natural Resources. The M.S. in Natural Resources is a 30-credit program. All students must take NR 378, Integrating Analyses of Natural Resource Issues. In addition, students must complete a Program of Study, present their work at the RSENr Graduate Student Symposium, successfully complete a comprehensive exam, have an accepted proposal, and defend their thesis or project (if either are required). To successfully complete the M.S. in

Natural Resources students must have a 3.00 grade point average. A student may be dismissed from the Graduate College if two or more grades below a 3.0 or "B" are received.

Additional requirements are established by faculty in several areas of concentration as indicated in the appropriate sections below. Students choosing the non-thesis option have other degree requirements (see below).

Aquatic Ecology and Watershed Science: This concentration requires enrollment in a one-credit special topics seminar organized by faculty and students in the concentration, and at least 12 additional hours of course work in the aquatic and watershed sciences, or supportive fields (approved by the student's studies committee). The student's comprehensive examination includes both a written and an oral component. Students in this concentration pursue a thesis.

Environment, Society, and Public Affairs: This concentration requires 24 to 27 credit hours of advanced courses. In addition to the general M.S. in Natural Resource requirements, course work must include Vermont Field Studies (one-credit), three courses from an approved list of courses reflecting this concentration's emphasis, a course in research methods, one ecology course, and 3-6 credits of project (3) or thesis research (6).

Environmental Thought and Culture: This concentration requires a minimum of 15 credit hours of advanced courses in a specialization within environmental thought and culture, in addition to Vermont Field Studies (one-credit) and 6 to 9 credits of thesis or project research.

Forestry, Wildlife Biology: These two concentrations are administered jointly by a common faculty and have the same requirements. Students are required to take 21 to 24 credit hours of advanced courses including the required NR 378, and 6 to 9 hours of thesis or project research. The student's comprehensive examination includes both a written and an oral component.

The non-thesis option is currently under development under the title "Conservation Leadership." This curriculum should be approved by the end of spring 2005.

Students may choose to work with a faculty committee outside of the structure of the concentrations indicated above to pursue interdisciplinary topics not covered under the fields of study included above. These students need to meet the requirements of the Graduate College and the general requirements for an M.S. in Natural Resources.

Student Responsibilities:

It is the responsibility of the student to understand requirements and to keep abreast of progress. The faculty advisor is expected to be knowledgeable, available for consultation, and actively involved in the student's experience, but it is the student who takes the lead and bears ultimate responsibility for completion of his or her program of study and thesis requirements.

FACULTY ADVISOR

Each graduate student is assigned (or chooses) a faculty advisor whose academic interests are matched with those of the student and who normally is from within the student's academic program. The advisor guides in matters of course selection, research direction, and overall requirements for completion of the degree. The advisor chairs the student's Studies Committee and usually serves as the thesis or project director. For students funded through research

projects, the advisor is usually the faculty member who is the Principal Investigator on the project.

STUDIES COMMITTEE

Each graduate student should, with the advice and counsel of the faculty advisor, form a Studies Committee during the first semester. The Studies Committee is a group of at least three faculty members, including a graduate faculty advisor from RSENR, one graduate faculty member from outside RESNR, and one additional University of Vermont faculty member. If necessary, committee membership may change and evolve with changes in the student's research goals. The committee is responsible for reviewing course requirements and overseeing the comprehensive exam, thesis/project defense, and related program matters. Membership of the committee must be recorded in the student's file.

It is useful practice for the student to keep committee members informed of progress. The committee may meet as often as the student's needs dictate, usually at least once per semester.

PROGRAM OF STUDY

Graduate students should, with the advice and approval of the faculty advisor, complete a Program of Study form before the end of the first semester. The Program of Study is to be submitted to the Graduate Program Coordinator of The Rubenstein School of Environment and Natural Resources for administrative review and recording in the student's file. This Program of Study is a non-binding but extremely useful projection of the student's entire course of study. Its completion requires thoughtful consideration of courses taken, and to be taken, transfer credits, and research interests, so that the student can review all requirements remaining and determine how and when each will be fulfilled.

SEMINARS

Seminars serve graduate students in two ways. First, there are opportunities to hear researchers explain how they have addressed scientific questions. Nowhere else do students get a better chance to exercise their critical abilities. Second, students giving their own seminars have a chance to digest and put into perspective a piece of work, which they have done or read about. It is an achievement to stand up and present scientific findings logically and cogently. Seminar presentations are excellent practice for prospective teachers, and no better method exists for preparing for comprehensive exams or the thesis defense. Graduate students in the School are expected to present their thesis/project research in a seminar at the annual RSENR Graduate Student Symposium, as well as in a seminar preceding the student's thesis/project defense.

COMPREHENSIVE EXAMINATION

The University requires that a written and/or oral comprehensive examination be taken in the field of specialization. Preparation for comprehensive examinations requires students to make an effort to unify and organize their knowledge in the field of their degree program. Students actually begin work toward their comprehensives when they begin graduate work, consciously collecting and integrating knowledge for some time before the examination. To aid in this process, students should solicit advice from their advisor and other Studies Committee members. Students may be advised to prepare by reading treatises or reviews in areas not directly covered by coursework or their research.

All RSENR students are required to take a written exam. At the discretion of the Studies Committee, or as a concentration requirement, an oral examination may also be required. All comprehensive examinations are taken on the UVM campus in Burlington. Only one re-examination is permitted for any comprehensive exam. Upon completion of the exam, the faculty advisor must complete the appropriate form, indicating the results of the exam, and when it was completed, and submits it to the Graduate College via the RSENR Graduate Program Assistant.

Master's students generally take their comprehensive exams in the third or fourth semester. Graduate College policy requires the student to register ahead of time for GRAD 397, the course title under which performance will be recorded on the transcript. There is no extra fee and no credit hours are awarded for GRAD 397.

The examination will assume a thorough grounding in the student's field of specialization. The final decision on content, length, composition, and format of the comprehensive exam rests with the Studies Committee.

THESIS OR PROJECT REQUIREMENTS

Thesis vs. Project: The distinction between a thesis and a project is one of emphasis. A thesis usually involves hypothesis testing and the collection and analysis of primary data. A project is usually an applied problem-solving activity addressing current issues in natural resources.

Guidelines for Writing a Master's Thesis or Project: Students beginning to write a thesis report shall obtain a copy of Thesis Guidelines from the Graduate College Dean's Office. Strict compliance with these guidelines is required for the thesis. The written component of a project is much more flexible and its form is determined by the student's Studies Committee.

Proposal: A formal proposal is required for a thesis/project and must be approved by the Studies Committee. The proposal should be approved before significant data collection or project work begins; this normally occurs by the end of one year of enrollment. Students should discuss this requirement with their faculty advisor. Notification of approval of the proposal must be recorded in the student's file. Because the project format is not as specifically identified as that for a thesis, students should include a description of their project's written products in the proposal.

Thesis Format: Students are allowed to use either the Standard Thesis, or the Journal Article Thesis format. The student's faculty advisor and Studies Committee will help determine which format is appropriate.

The **Standard Thesis** is one in which the author describes the scholarly work in the main body of the document, including a complete review of the literature and an extensive discussion of methodology, results, discussion, and conclusions.

In the **Journal Article Thesis** the author divides the document into two parts. The main part is one or more articles prepared according to the style requirements of a scholarly journal, so that the article is suitable for publication. The article should avoid extreme brevity and be understandable to the members of the student's Studies Committee, even if this necessitates

some elaboration of the standard article format. The other part of the thesis provides the context for the article. It includes a comprehensive literature review and bibliography.

The **Standard Thesis and the Journal Article Thesis** differs in organization and placing of material, but not in overall content, scholarship, or clarity of presentation. The student's thesis advisor supervises preparation of the thesis. Regardless of style and format, all theses must be prepared in accordance with accepted standards of academic integrity, including proper citation and attribution of all material that is not the original product of the writer. Details about mechanical format (e.g., paper and print specifications, number of copies) are published in the Graduate College Guidelines.

Submission: The thesis must be submitted to the Graduate College for a format check four weeks before the scheduled oral defense. At this time, the thesis must be complete, essentially error-free, and in correct format, although the paper and print quality used may be less than that required for the final version. The deadlines for submission of a project and thesis for a specific graduation date are indicated on the Graduate College Calendar (see WEB). The student also must provide copies of the thesis or project to members of the Defense Examining Committee at least two weeks before the scheduled examination.

Oral Defense: The oral defense of the project may be scheduled only after successful completion of the Comprehensive Examination. The Defense Examining Committee is usually identical in composition to the Studies Committee. There must be at least three faculty members and at least two of these must be regular members of the Graduate Faculty. One committee member must be from outside RSENR, must be a member of the Graduate Faculty, and acts as Chair of the Examining Committee. Details given in the Catalogue for oral defense of theses also apply for oral defense of projects. The Chairperson of the Defense Examining Committee has the responsibility for ensuring proper conduct of the examination and appropriate documentation of results. If the candidate's Defense Examination performance is not satisfactory, one re-examination is permitted.

Performance Evaluation: The acceptability of the thesis/project is determined by the Defense Examination Committee. Status of performance on the defense examination is officially recorded as a course, GRAD 399 (Thesis Defense) which carries zero credit hours and for which there is no fee. Students must register for GRAD 399 the semester in which they defend their thesis. This may be accomplished at registration, or the course may be added at any time during the semester up to two weeks before the scheduled defense. The registration must be approved and signed by an authorized person from the Graduate College. Upon completion of the defense, a grade of S (Satisfactory) or U (Unsatisfactory) is assigned for GRAD 399. A copy of the grade report must be recorded in the student's file.

Disposition: Following the successful defense of the thesis or project, and immediately after necessary corrections and approval by the Examining Committee, the student delivers three copies of the revised project to the Graduate Program Coordinator for RSENR, or three copies of the revised thesis to the Graduate College Office. This is usually within two weeks following the defense. If revisions are required by the Examining Committee, they must be completed in a timely manner, approved by the Committee, or by one faculty member designated by the Committee, and delivered to the Program Chair or Graduate College Office within two weeks of the date of defense. This deadline may be extended to a maximum of six weeks under extenuating circumstances.

SUGGESTED SCHEDULE FOR COMPLETION OF DEGREE PROGRAM

Many factors influence the timing of an individual student's program. The following schedule for a full-time Master's student in the RSENr reflects the expectations of the Graduate Studies Standards Committee and the RSENr faculty.

Master's Degree Schedule (full-time students):

1. **Semester 1:**
 - Coursework and Research
 - Assemble Studies Committee
 - Program of Study Submitted
2. **Semester 2:**
 - Proposal Outline Submitted to Student's Committee
3. **End of Year 1:**
 - Proposal Approved by Student's Committee
4. **Semester 4:**
 - Comprehensive Exam Completed
5. **End of Year 2:**
 - Thesis/Project Completed
 - Defense Held

Full-time graduate students in the RSENr are encouraged to complete all degree requirements within 24 months after initial enrollment. It is recognized, however, that to obtain publishable results some students may need to conduct two full years of data collection, and may therefore require some additional time to write the thesis. **Time Limits** for completion of the degree program set by the Graduate College are detailed in the UVM catalogue. Essentially, a full-time student is allowed three years, and a part-time student has five years.

Continuous Registration Fee: According to Graduate College regulations, each graduate student who has completed all course requirements, but not all degree requirements (e.g., comprehensive examination, thesis/project or defense of thesis/project) must pay a continuous registration fee for each semester of the academic year (fall and/or spring) until degree requirements are completed. During the period of continuous registration, the student is entitled to all privileges afforded a student who is enrolled full-time for credit.

GRADUATE STUDENT FUNDING

Graduate Teaching Fellowships and Graduate Research Assistantships are available to RSENr students. Although the awards often vary in amount and duration, teaching fellowships usually consist of a stipend for nine months, and a tuition scholarship; assistantships carry a stipend but no tuition scholarship and are often for a full calendar year. Fellows and Assistants are expected to provide between 10 and 20 hours per week of service in support of teaching or research activities, depending on their appointment. Summer Research Assistantships usually require 20 hours per week of service. Specific expectations are stipulated in the award letter.

Teaching Fellowships and Research Assistantships for the M.S. normally are awarded for a maximum of two years.

Tuition Scholarships are available for research credits if a student is funded on a research grant or contract. Details and applications forms are available on the Graduate College Web site (see below). In addition, a health insurance fee subsidy is available for full-time students. Details and application forms are on the Graduate College Web site:
<http://www.uvm.edu/~gradcoll/bluebook2000.html>

ALLOCATION OF OFFICES AND STUDY SPACE

Limited office space in the Aiken Center is available for MS graduate students. Teaching fellows and funded research assistants in their second year are usually provided desk space in offices or laboratories most appropriate for their teaching or research responsibilities. Other graduate students are assigned space and/or lockers in the Graduate Student Center, as available.

AUTHORSHIP AND DISPOSITION OF DATA

It is standard practice for graduate students and faculty to share authorship on publications resulting from thesis or project work. Graduate students are encouraged to discuss authorship with their advisors before manuscripts are prepared for publication.

A copy of all data collected as part of a thesis or project must be clearly annotated and provided to the student's major advisor at agreed-upon intervals. Unless specifically agreed to, these data may be used in subsequent research and studies conducted by RSEN. Appropriate credit will be given to individuals who collected these data.

SATISFACTORY PROGRESS

Each semester, the Graduate Standards Committee (GSC) will review the progress of every graduate student in the RSEN. 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 according to the Suggested Schedule for Completion of Degree and review performance in coursework (maintenance of a GPA >3.0). Students significantly behind schedule, or not maintaining a GPA >3.0 will be contacted by the GSC as follows:

1. Students with a cumulative GPA <3.0 will be placed on academic probation.
2. Students who are making substantially slower progress than recommended in the schedule (above) will receive a letter from the GSC chair (cc: advisor) that urges them to schedule and complete thesis requirements in a timely manner, and requesting information concerning any mitigating circumstances that might affect timely completion of the thesis.
3. If the student fails to show substantial progress on their thesis within three years of inception of the degree program, and in the absence of extenuating circumstances, the GSC chair will send a letter to the student and their advisor warning that deactivation may be necessary if progress is not made.
4. In situations in which there is a consistent lack of progress on thesis requirements over a three-year period, no evidence of extenuating circumstances, and after consultation with the advisor by the GSC chair, the GSC chair will send a letter to the Associate Dean for Graduate Education in RESNR (cc: student and advisor) recommending deactivation. The

Associate Dean shall notify the student and advisor of his/her decision within four weeks, and notify the Graduate College regarding any recommendations for deactivation.

INDIVIDUAL VARIABILITY

Despite similar requirements and expectations for all graduate students, no two graduate school experiences are the same. Research projects vary widely in their rigor and complexity; financial aid packages differ considerably; and individual advisors have different expectations for their students. Because of this variability, please remember that it is the responsibility of the graduate student to understand requirements and timetables for the degree.

The advisor/graduate student relationship should be a special one that leads to important contacts in the future. Your graduate advisor may become one of your most important long-term professional allies and colleagues.