University of New Hampshire

# NATURAL RESOURCES AND EARTH SYSTEMS SCIENCE (NRESS) PH.D. PROGRAM

# STUDENT GUIDE TO PROGRAM REQUIREMENTS

## OVERVIEW OF PROGRAM REQUIREMENTS

Full-time students have one year and part-time students have two years to complete the first two requirements: guidance committee nomination and submission of the preliminary Coursework Approval Form (CAF).

## GUIDANCE COMMITTEE NOMINATION

One of the most important steps a student can take to ensure progress in their degree program is to nominate a committee. The committee is called a guidance committee until the student advances to candidacy at which point it becomes the doctoral committee. Committee members advise the student on specific choices for coursework, assist the student in formulating the dissertation topic, and conduct all required examinations.

The Ph.D. guidance and dissertation committees must consist of at least five members. Three of the five members (including the chair) must be NRESS faculty, and committee members must be from more than one academic department. Students are strongly encouraged to include at least one off-campus member. Off-campus committee members must hold a Ph.D. degree and be approved by the student's advisor, the NRESS Program, and the Graduate School Dean. Students should select their guidance committee in a timely manner, within one year for full-time students and two years for part-time students.

The student's advisor should assist in determining appropriate committee members. The committee determines the direction of a student's research and the required course work so it is important to choose appropriate committee members. The committee can be revised as the student progresses if the dissertation topic has moved in a different direction, the student needs a different area of expertise represented on the committee, or a committee member is no longer available to serve on the committee. (Note: Changes in the committee are made by submitting the appropriate form to the NRESS Program Coordinator: Doctoral Guidance Committee Form or Doctoral Dissertation Committee Form.)

Once committee members have been determined and they have agreed to serve on a committee, the student must submit a committee nomination form to the NRESS Program Coordinator. The Doctoral Guidance Committee Form can be downloaded from the Graduate School webpage at http://www.gradschool.unh.edu/fp.php or found under the forms menu on the NRESS Program website. This form does not require the signatures of the individual committee members. The NRESS Program will approve your committee and forward your form to the Graduate School. Note that if you are including any off-campus or non-Graduate School faculty on your committee, the Graduate School will request a copy of that person's CV. An electronic version of the CV is preferred and may be sent by e-mail to the NRESS Program Coordinator.

## COURSEWORK AND CREDIT REQUIREMENTS

Each student must complete a Coursework Approval Form (CAF), which lists the courses he/she intends to take for completion of the program. A preliminary form (no signatures required) should be submitted within the first year of the student's program as an outline of the student's coursework plan. A final version, signed by the student's committee, must be submitted once all required coursework is completed and prior to advancement to candidacy. This form can be obtained from the NRESS Program website.

The NRESS Program requires students to take NRES 997 Interdisciplinary Research, and one course in each of four core areas *while enrolled in the program*: Natural Sciences, Methods, Ethics/Policy/Law, and a seminar. Any course used to satisfy the Natural Sciences, Methods and Ethics core areas must be a classroom course of at least 3 credits. The seminar course must be interactive and must be at least 1 credit. Independent study courses may not be used to satisfy core requirements. All additional coursework requirements are determined by the guidance committee, with the goal of enhancing the student's selected field of study or correcting any deficiencies in the student's previous program. As required courses are determined by the committee, it is beneficial to finalize the committee as soon as possible. With an approved course of study, the student gains focus and can progress quickly within the program.

Core area courses must be taken while the student is enrolled in the NRESS Program. Students may apply a maximum of 12 credits of independent study and/or seminar courses to their total course requirement. Graduate level courses taken prior to admission may be transferred into the program and applied to the total coursework requirement only if they have not been used to earn another degree. The Graduate School allows up to 12 credits from UNH or 8 credits from other institutions to be transferred into the graduate program, with approval. Courses taken while enrolled in a previous degree program cannot be used toward your Ph.D. degree, even if they were taken at UNH. Students who are in a current master's degree program need to be aware that courses will not transfer and cannot be used to satisfy core area requirements. Transfer of credits must be approved by the student's advisor, the NRESS Program Chair and the Graduate School. Please consult the Graduate School catalog for more information on the regulations governing transfer of credits, residency requirements, and other regulations applicable to Ph.D. students.

## ADDITIONAL REQUIREMENTS

- Language proficiency may be required at the discretion of the student's advisor/committee. If so required, a student will need to demonstrate proficiency in one foreign language or one computer language.
- Students entering the NRESS Program without a master's degree are required to complete a minimum of 36 credit hours. There is not a specific total credit requirement for students who have completed a M.S. or M.A. degree; only the four core area courses are required by the program. Additional course requirements are at the discretion of the guidance committee.

If the student does not complete the above within the required time frame, he/she may be removed from the program after a review by the NRESS Executive Committee.

## PRE-CANDIDACY EXAM REQUIREMENTS

Each student is required to pass three examinations, each of which has both a written and oral component. Students must complete the proposal exam and comprehensive exam in order to advance

to candidacy. The final dissertation defense is the last step in the student's program (see below for details). The NRESS Program does not specify whether the proposal or comprehensive exam should be completed first; the order is at the discretion of the student's advisor and committee. When the student completes each exam, the student's advisor sends a letter or email to the NRESS Program Coordinator stating the date completed and which exam has been passed. Additional preliminary examinations may be administered, as the committee deems necessary; the committee may also determine areas where the student needs additional coursework.

1. **Comprehensive exam.** (Sometimes referred to as the qualifying exam.) The student must prepare an extensive written answer to one question from each committee member that covers the basic concepts and factual material deemed essential for the student's program. Three weeks are allowed for completion of the exam during which time students are expected to work solely on their answers. Answers are expected to be anywhere from 10 – 20 pages per question with extensive literature citations. Completed written answers are submitted to the advisor who then distributes copies to the other committee members for review. Approximately 1 – 2 weeks are allowed for the committee to read the answers, after which time the student gives an oral presentation to the committee. Following the presentation, committee members will ask for clarification of the student's answers, if necessary. The committee may require a student to repeat part, or all, of the comprehensive exam if the student's performance is deemed unsatisfactory. This exam should be taken within three years of initiation of graduate study in the program.

2. **Proposal exam.** The student must present a written summary of the proposed dissertation research topic to the committee and complete a public oral presentation of the proposed research. Proposals should include a detailed review of current literature in the research area and an outline of the proposed dissertation topic complete with data collection methods, statistical analyses, proposed final data format or any other items relating to the area of proposed research. Items included will vary depending on the type of research proposed and the student's advisor should help in this area. Total proposal length can vary from 15 to 50 pages. After the public oral presentation, the committee and student will meet in private to discuss additions and changes to the proposed research. If there are substantial revisions required, the student may be asked to submit a revised version of the proposal to the entire committee or the committee may delegate final approval of the proposal to the committee chair. Please notify the Program Coordinator of your public presentation **at least three weeks in advance** by sending an email with the following information: Proposal title, brief synopsis of the research project, advisor, building, room number, date and time. The Program Coordinator will create a flyer for posting and distribute the announcement to the NRESS and UNH community.

A student may be required to take additional courses following either the comprehensive or proposal exam or may be removed from the program following failure of any of the required exams.

## ADVANCEMENT TO CANDIDACY

Students advance to candidacy after successfully completing the comprehensive exam, proposal exam, and all coursework required by the program and the guidance committee as summarized on the Coursework Approval Form (CAF). Students with a master's degree must advance to candidacy within 4 years; students without a master's degree have 5 years. These time limits are established by the Graduate School.

When all candidacy requirements have been met, the student will submit a Doctoral Candidacy Form (available on both the Graduate School and the NRESS websites) to the NRESS Program for approval. A final copy of the Coursework Approval Form (CAF) signed by all current guidance committee members will be submitted to the NRESS Program Office and the Graduate School along with the Doctoral Candidacy form. The CAF will be checked against the current transcripts to ensure that it accurately reflects the coursework taken by the student. If they do not match, the student will need to correct the CAF and obtain new signatures from the committee.

## DOCTORAL DISSERTATION REQUIREMENTS

After reaching candidacy, a student has three years to complete and defend the dissertation. If this deadline is not met, a waiver for an extension must be filed with the NRESS Program Office and the Graduate School or the student will be removed from the program.

The student is expected to have a near-final draft of the written Ph.D. dissertation prior to the final exam. Once the draft is written, the student is required to complete an oral defense of the dissertation, which will include both a public presentation and examination by the student's committee. Please notify the Program Coordinator of your public dissertation defense **at least three weeks in advance** by sending an email with the following information: Dissertation title, abstract, advisor, building, room number, date and time. The Program Coordinator will post this information on the Graduate School Website, create a flyer for posting, and distribute the announcement to the NRESS and UNH community.

When the student completes the dissertation exam, the student's advisor sends a letter or email to the NRESS Program Coordinator stating the date completed. The Graduate School has specific requirements for the layout of the final dissertation and a helpful checklist that can both be found on the Graduate School webpage. The NRESS Program does not have additional requirements beyond those of the Graduate School. Each student, along with the committee, will decide on the format most compatible with the nature of the research and choose a multi-chaptered dissertation, a series of individual papers, or some other option.

As a student approaches completion of the degree program, she or he should estimate when he/she expects to graduate. At this time, an Intent to Graduate form must be filed online with the Graduate School. Deadlines for filing without a late fee are posted on the UNH Academic Calendar. Once an Intent form is filed, a Degree Completion form is generated by the Graduate School and sent to the advisor and NRESS Program Coordinator for verification and signatures. The date of the student's dissertation defense must be filled in once the student has passed the defense. The form is then returned to the Graduate School and passed on to the Registrar who finalizes the student's records and awards the degree.