



A GUIDEBOOK FOR WRITTEN COMPREHENSIVE EXAMINATION PROCEDURES IN THE ENVIRONMENTAL DYNAMICS PROGRAM

Approved by the ENDY Steering Committee April 2006
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OVERVIEW

During the 2005-2006 academic year, the ENDY Steering Committee approved sweeping changes in the written comprehensive examination procedure as part of the qualifying examinations for candidacy in the Environmental Dynamics Program. This document provides guidance to all ENDY students, faculty advisors, and committees regarding the intent and purpose of the new written examination format as well as program procedures to be followed in the conduct of these examinations.

For fall semester 2006, students scheduled for written comprehensive examinations have the option of taking the exam in either the old or new format. Beginning with the spring semester 2007, all written comprehensive examinations will conform to the new exam format.

The comprehensive examinations consist of two rigorous examinations: 1) a written comprehensive examination and 2) an oral defense of the dissertation proposal. Both examinations are intended to evaluate the level of scholarship of the student by assessing the student's command of information learned in required courses and determining the adequacy of the student's intellectual preparation to engage in significant research leading to completion of the dissertation. As such, successful completion of these examinations marks an important milestone in the student's progress toward the degree as she/he makes a transition from largely classroom-oriented study to independent research that is the hallmark of the doctoral tradition of academic achievement.

The primary motivation for changing the format of the written comprehensive examination was a desire by ENDY faculty to develop a process more conducive to advancing the research agenda of individual students while at the same time providing a means for examination committees to better evaluate the preparation and suitability of each student for their proposed doctoral research.

Policies and procedures related to completion of the new written comprehensive examination format are provided below as a reference for all students, committee chairs, and committee members.



QUICK REFERENCE:

ENDY WRITTEN COMPREHENSIVE EXAMINATION PROCEDURES

2nd SEMESTER TASKS

1. Comprehensive Examination Committee assembled during student's 2nd semester in the ENDY program.
2. Committee membership restricted to faculty with Graduate Faculty I or II status.
3. Committee must have 5 faculty (advisor + 4) representing at least 2 disciplines.
4. Committee meets with student to become familiar with student's background, course work, dissertation interest, and other experiences.
5. General topics are selected between the student and the committee; the student prepares reading lists of journal articles, books, chapters, etc. that are appropriate for each of the topics; committee may modify list. These reading lists shall define the "universe" of material for which the student shall be responsible on the written exam.

3rd SEMESTER TASKS

1. During earliest two weeks of semester, student convenes committee to discuss written comprehensive exam.
2. Comprehensive Examination Committee prepares topic for a) review paper and b) research proposal that will constitute the written comprehensive examination.
3. All students scheduled to take examinations should endeavor to take these during the same 30-day interval. ***NOTE: Students are given exactly 30 days to complete both writing tasks. It is imperative that all committees adhere to this policy.***
4. Committee chair informs ENDY director in writing of the starting date for an exam. Both written assignments are due no later than 5:00 p.m. exactly 30 days later. No exceptions.
5. All written examinations for all students should be completed no later than **15 October** (for fall exams) or **28 February** (for spring exams). ***No extensions to this time frame will be permitted except under the most extraordinary conditions.***
6. Written comprehensive examination has two parts: a) scholarly review paper, b) formal research proposal in NSF style. Both written assignments are due at 5:00 p.m. on the 30th day following their assignment to the student.
7. Written works are evaluated "Excellent", "Very Good", "Good", "Fair", "Poor"; 4 out of 5 committee members must agree that works rank at least "Good" to pass exam.



A. Written Comprehensive Examinations

Comprehensive Examinations are written only twice a year. Written comprehensive exams are given during the first month of the fall and spring semesters; all students writing exams during a particular semester write these during the same month. Students are expected to complete written comprehensive examinations no later than **15 October** during the fall semester and no later than **28 February** during the spring semester.

1. Comprehensive Examinations Committee

During the second semester of enrollment in the ENDY program and in consultation with the Advisory Committee, each student will form a Comprehensive Exam Committee. This committee consists of the advisor and at least four other faculty members who hold the rank of Faculty I and II on the Graduate Faculty and who represent at least two disciplines.

This committee is selected to reflect an understanding of the student's general research program, and its function is to prepare and grade the student's written comprehensive exams. Normally, there is some carryover between the Advisory Committee, the Comprehensive Examination Committee, and the Dissertation Committee; commonly the Comprehensive Examination Committee evolves to become the Dissertation Committee. Further, committee members are normally Fayetteville campus faculty members in order that they know the student and her/his work and interests.

The student's written examinations will be tailored to the individual student, stressing that student's background, course work, dissertation interest, and other experiences that are relevant to the student's career goals. The committee will consult with the student during the student's second semester in the ENDY program. The purpose of an early meeting with the student is to allow the committee members to decide the nature of the examination.

Once the general topics are selected between the student and the committee, the student will prepare reading lists of journal articles, books, chapters, etc. that are appropriate for each of the topics. Those reading lists shall be modified and approved by the faculty members serving on the Comprehensive Examination Committee. These reading lists shall define the "universe" of material for which the student shall be responsible on the written exam.

2. Structure of the Written Comprehensive Examination

The student's Comprehensive Examination Committee will prepare the topic for the examination, critique the written works, and determine if the student has passed all the sections of the exam. All members of the student's committee will participate in these three tasks. In evaluating student performance on the written comprehensive exam, there must be at least four favorable votes (out of five) among the committee to confer successful completion of that part of the examination.

The Comprehensive Written Examination will be composed of two written works to be completed during a 30-day period at the beginning of the student's 3rd semester of enrollment in



the ENDY program. The Chair of the Comprehensive Examination Committee will provide a written memo to the ENDY Director indicating the starting date of the student's examination. The examination will end at 5:00 p.m. exactly 30-days later. This date will be monitored by the ENDY Administrative Assistant and verification of submission of both written examination documents will be provided by the committee chair. ***No extensions to this time frame will be permitted except under the most extraordinary conditions.*** The ENDY director and co-directors will have sole responsibility for determining whether or not an exception under 'extraordinary conditions' will be granted.

The first of the required written works will be a comprehensive, scholarly review of a topic relevant to the student's intended dissertation research. This written work will examine in critical detail extant knowledge in this topic area, significant concepts and controversies related to this topic, and gaps in knowledge related to this topic that may lead to new, innovative research to enhance knowledge related to this topic. It is expected that the quality of this review paper will be such that it could be submitted for peer review to a relevant academic journal with minor or no revision.

The paper should conform to formatting requirements of a specific academic journal to be determined and agreed upon by the Comprehensive Examination Committee. The paper should be of page length appropriate for that journal, double-spaced, with full citations, figures and tables compiled at the end of the manuscript. A typical manuscript prepared for submission to an academic journal will be approximately 25-30 pages of text with tables, figures, and references cited added as necessary.

In preparation for the written comprehensive examination, it is imperative for all committee chairs and committee members to meet early with the student to discuss research interests, the direction of desired dissertation research, and the student's background relevant to conducting this research. The committee may recommend additional literature or help the student redirect focus of the prospective research in an effort to develop a truly manageable dissertation topic. Once the committee reaches consensus regarding the nature of prospective research, it should begin deliberation on a suitable topic to be reviewed by the student. It is the duty of the committee to develop a topic for review that is sufficiently broad that it enables adequate evaluation of the student's background and ability yet sufficiently narrow that the review paper can be composed during the 30-day interval of the examination.

The second written work to be assessed by the Comprehensive Examination Committee will be a research proposal composed by the student in the format typical of a National Science Foundation grant proposal. It is expected that the document will conform to all proposal formatting requirements as specified in the NSF Grant Proposal Guide (http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg). In order to make the writing tasks for this examination more manageable, proposals prepared by students will contain only the following sections as specified in the NSF Grant proposal Guide:

- 1) Project summary (NSF GPG item 2b)

- 2) Project descriptions (NSF GPG item 2d)
- 3) References cited (NSF GPG item 2e)
- 4) 2-page biographical sketch (NSF GPG item 2f)
- 5) Budget (GA salary, fringe benefits, travel, materials/supplies, other direct costs, facilities & administration costs, tuition)
- 6) facilities and equipment (this will be short, but should include access to computers, software, field equipment and vehicles of various kinds, instrumentation such as microscopes or other analytical devices)

The project description (including text, figures, tables) cannot exceed 15 single-spaced pages. The proposal should provide a detailed description of research of interest to the student, preferably related to the student's dissertation, and should be hypothesis driven. The specific topic of the proposal should be agreed upon by the Comprehensive Examination Committee in consultation with the student.

Throughout the 30-day interval of the examination, the student is permitted to confer with individual committee members to receive clarification or additional guidance with technical or scholarly issues. However, the committee shall not edit portions of either the review manuscript or research proposal during the examination interval; a primary purpose of the exams is to determine the adequacy of the student's technical writing capabilities.

Upon completion of the written works, the student will provide each member of the Comprehensive Examination Committee with a copy (either hard copy or electronic version if requested by committee members). It is the duty of the Comprehensive Examination Committee to review both documents objectively, critically, and fairly to assess the student's preparation and scholarship regarding the assigned topics. Upon review of the written works, the committee will convene to discuss the strengths and weaknesses of the written works and to determine the student's overall performance in completing the assigned tasks. Evaluation will take the form of qualitative statements of "Excellent", "Very Good", "Good", "Fair" or "Poor". Following evaluation of the written works, the committee will report directly their assessment to the student and ENDY director. Students must receive passing assessments ("Good" or better) on both written assignments from at least 4 of the 5 committee members in order to be permitted to move on to the next phase of the qualifying examinations (oral defense of dissertation proposal).

3. Procedure for Failed Written Comprehensive Examination

If the student does not pass a written assignment, a second opportunity to take and pass the assignment(s) may be arranged *at the discretion of the Comprehensive Examination Committee*. The second written comprehensive exam will be conducted using a format composed of specific questions submitted by committee members. The general subject areas to be covered during this second examination will be:



- Environmental Dynamics issues from the core curriculum and related courses,
- Methods related to the student's research topic;
- Theory and previous works of others related to the student's research topic;
- Substantive material related directly to the student's dissertation topic.

Normally, the exams are given in the order indicated above.

The student's Comprehensive Examination Committee will prepare the questions, grade the answers, and determine if the student has passed *all* the sections of the exam using the qualitative evaluation "Pass" or "Fail". All members of the student's committee will participate in these three tasks. In evaluating student performance on each section of the exam, there must be at least four favorable votes (out of five) among the committee to confer successful completion of that part of the examination.

Exams will be written over four consecutive days, one part being written each day. The period for writing each exam will be approximately four hours per day. The advisor will be responsible for locating a suitable room in which the student may write the exam. Unless the committee agrees to a change in normal procedures, for a particular part of the exam, these exams are closed-book exams. Necessary preparations will be given to securing space and a neutral computer, to which the student does not normally have access. Exams may be computer-written or hand written depending upon the student's choice.

The second written comprehensive exam must be passed in entirety. That is, 4 of the 5 committee members must agree that the exam is passing in its entirety.

If the student fails to pass all sections of the exam on the second opportunity, the committee has additional discretion to recommend, under very special circumstances, that the student be permitted to take the exam for a third (and final) time. If a student needs to retake the exam, that will occur during the following semester (at the next earliest opportunity) and the student must pass the entire exam before proceeding further in the ENDY program.

If a student fails any portion(s) of the written comprehensive exam and declines any opportunity to retake the exam, the failing grade will stand and the student will be dismissed from the ENDY program.