
DOCTORAL PROGRAM

INTRODUCTION

The PhD program offers opportunities for advanced research in the areas of socio-economic spaces and change, environmental governance and management, and biophysical systems and processes. There is also a collaborative PhD program that is offered with [International Development Studies](#). These programs are distinctive in that they emphasize interrelationships among biophysical and human systems. A unifying theme is the emphasis on integration and evaluation. Scales of inquiry range from the local to the global, in both developed and developing countries.

ADMISSION STANDARDS

Applicants for the PhD program should have a recognized Master's degree with an 80% (A-) average in their graduate-level studies. Applicants with excellent standing at the honours baccalaureate level who wish to proceed directly to doctoral study will first enroll in the Master's program. A superior record and a particular aptitude for research may, on the recommendation of the Department, allow transfer to the PhD program without completion of the Master's degree.

TRANSFER FROM MASTERS TO DOCTORAL PROGRAM

The following requirements must be met:

1. The student must have at least a B+ average in his or her undergraduate program.
2. The student must have completed GEOG*6090 and GEOG*6091 plus at least 2 courses (1.0 credits), 1 of which must be in Geography, with at least an A- average. The student must have submitted and presented a satisfactory Master's thesis proposal in GEOG*6091.
3. The student's Advisory Committee must strongly support the transfer request. The Advisor must be willing to commit research funding to the student equivalent to the departmental requirement for accepting new PhD students.

If these requirements are met, then the following procedures guide the transfer process:

1. The student submits the Application for Transfer to Another Program form (available on the Graduate Studies web site) to the Graduate Coordinator.
2. The student also submits a written report of his or her progress in research to the Advisory Committee and to the Graduate Coordinator. This report should include a review of research conducted for the Master's thesis and any papers presented, published or submitted, research seminar title, etc.
3. The Advisory Committee submits to the Graduate Coordinator a written evaluation commenting on the student's aptitude for doctoral level research and on the suitability of the Master's research project for expansion to a doctoral project. The student should be highly rated by the Advisory Committee.
4. The Graduate Admissions Committee reviews the documents provided ("Application for Transfer" form, student's research progress report, and Advisory Committee's evaluation of student) and prepares a report of its recommendation. If the Admissions Committee does not support the transfer, then the student is informed of the decision and transfer does not proceed further. If the transfer is supported, then the Application for Transfer form is signed by the Department Chair and forwarded with the

Department's recommendation (plus all supporting documentation) to Graduate Program Services. The student must pay the transfer fee at this time.

5. The above procedures must be initiated in and completed before the end of semester 3.
6. The Admissions and Progress Committee, on behalf of the Board of Graduate Studies, examines the documentation, including the official academic record, and, if appropriate, recommends admission to the PhD program without completing the Master's program.

QUALIFYING EXAMINATION

The purpose of the qualifying examination is to determine the student's competence in the broad field of the PhD program in Geography, and his or her intellectual preparedness to undertake research for the PhD thesis. The criteria for demonstrating such competence and preparedness include not only an understanding of the theory and methodology related to the proposed area of research, but also a familiarity with the scholarly fields that form the major building blocks of the PhD program in Rural Resource Evaluation and Environmental Analysis. Students must complete GEOG*6100 Geographic Scholarship and Research and attain a grade of B prior to undertaking the qualifying examination.

The qualifying examination is to be taken no later than the end of Semester 4. Thus, the student and his or her Advisory Committee should jointly decide the scope of the examination as early as possible in the student's program to allow sufficient time to prepare for the examination.

EXAMINING COMMITTEE

The qualifying examination will be conducted by an Examining Committee made up of the student's advisor, two other members of the Advisory Committee (one of whom must be a member of another department), and at least two other members of the Graduate Faculty (at least one of whom will be from Geography). The Committee Chair (Departmental Chair or the Graduate Officer) is responsible for making all arrangements for the qualifying examination.

The Examining Committee plays three major roles in the qualifying examination process: provision of questions for the written examination, questioning during the oral examination, and decision making regarding the student's performance in all aspects of the qualifying examination.

COMPONENTS OF THE QUALIFYING EXAMINATION

The qualifying examination has four components:

1. A written evaluation prepared by the Advisory Committee of the quality of the student's performance to date in research, and of the student's potential as a researcher.
2. A description of the scope of the qualifying examination consisting of a description of the scholarly field and research area as well as a reading list. This document is prepared by the student in consultation with the Advisory Committee. Upon approval of this document by the Advisory Committee, it is submitted with the student's request for the qualifying examination.
3. A written examination completed by the student, based on questions prepared by the Examining Committee.
4. Oral examination of the student by the Examining Committee.

WRITTEN EVALUATION

Prior to a student undertaking the qualifying examination, the Advisory Committee must provide a written evaluation of the student's performance in the PhD program and potential as a researcher. This evaluation must be signed by all members of the Advisory Committee, and must accompany the request by the student for the qualifying examination. To allow sufficient time for the Advisory Committee to evaluate the student, the written evaluation normally should not be completed before the end of the second semester. Copies of the evaluation will be circulated to the student and to all members of the Examining Committee before the examination.

SCOPE OF QUALIFYING EXAMINATION

The scope of the qualifying examination is a function of the student's research interests and the broad objectives of the PhD program in Rural Resource Evaluation and Environmental Analysis. Thus, this description of the scope of the examination, which will be prepared by the student in consultation with the Advisory Committee, is a key component of the qualifying examination. It defines the general boundaries of the pertinent scholarly fields and research areas, guides the Examination Committee's preparation of questions, and constitutes a reference list for the written examination. GEOG*6100 is explicitly designed to help students develop this description.

This description must be approved by the Advisory Committee, and must be provided to the members of the Examining Committee four weeks prior to the written examination. It should have the following main sections:

- Introduction. In about 750 words, the introduction should outline the scope of the student's research interests, identify the areas within which the student will make an intellectual contribution, and define in broad terms the pertinent elements of the scholarly field and research area.
- Scholarly Fields. This section describes in detail the scholarly fields addressed by the student, and provides a list of pertinent references. The fields and literature identified must pertain to the resource assessment area of specialization, and to either the biophysical processes specialization or the rural socioeconomic resources specialization.
- Research Areas. This section describes in detail the student's research area, and provides a list of pertinent references. The scope of this section will be decided jointly by the student and the Advisory Committee.

It is recognized that the breadth and depth of the literature used to define the scholarly fields and research areas identified will vary from student to student, depending on the nature of the research questions and problems. However, in all cases it is expected that students will present literature that demonstrates that they have explored pertinent conceptual, theoretical, and methodological issues.

WRITTEN EXAMINATION

Upon receipt of the above description, members of the Examining Committee will prepare questions that address pertinent conceptual, theoretical and methodological issues relevant to the student's scholarly field and research area -- as defined and outlined in the description of the scope of the examination. Normally each member of the committee will prepare one to two questions for the scholarly field section and one to two questions for the research area section. Questions will be submitted to the Graduate Officer, who will work with the student's advisor to prepare the final set of examination questions (six for the scholarly field and four for the research area).

The student must address three of six questions relating to the scholarly field, and two of four questions relating to the research area. Each answer should be a maximum of 1,500 words long, and must be typed, double-spaced, and

supported using appropriate citations. A separate reference list is not needed, except when a source not already listed in the student's reading list is cited. Figures, maps and diagrams may accompany the written answer.

The student will have five days to complete the written examination. Normally questions will be provided to the student on a Monday morning, while the written answers will be submitted to the Graduate Officer on the following Friday.

In answering the questions, it is expected that the student will make effective use of the pertinent literature, and will demonstrate a thorough understanding of conceptual problems, theories, and methodologies. Additionally, students must demonstrate the ability to evaluate critically the literature and, where appropriate, to integrate major contributions in the literature.

ORAL EXAMINATION

An oral examination will follow within seven to ten days of completion of the written examination. The oral examination should last no more than three hours, and will involve only the student, the Examining Committee, and the Chair of the Examining Committee. The Chair of the Examining Committee is responsible for all aspects of the oral examination.

As with the written examination, the purpose of the oral examination is to allow the student to demonstrate critical appreciation of the scholarship within the research area, and familiarity with the broader scholarly field of the PhD program. The period between the written and the oral examinations allows the student to reflect further on the questions in the written examination; to prepare to defend, elaborate, or reconsider the written answers; and to prepare answers to the questions not answered.

DECISION MAKING

In reaching a decision concerning the student's performance in the qualifying examination, the Examining Committee will consider the written evaluation, the answers prepared during the written examination, and the student's performance during the oral examination. The Examining Committee will determine the relative importance given to each of these components. Decision making occurs through a vote, where the result is either satisfactory or unsatisfactory. The student is deemed to have passed the qualifying examination if not more than one of the examiners (including the Chair) votes negatively. An abstention constitutes a negative vote. In the event of failure, the student may repeat the qualifying examination (both written and oral components) once within six months of the first attempt.

THESIS PROPOSAL

Following successful completion of the qualifying examination, approval to proceed with thesis research will be based on the submission of a written proposal to the Advisory Committee, and an oral presentation to the Department at large. Where the qualifying examination focuses on broader conceptual, theoretical and methodological issues pertinent to the student's scholarly fields and research areas, the thesis proposal provides a framework for the actual research.

The thesis proposal should not exceed 5,000 words, and should contain the following components:

- Introduction providing the context for the research question
- Description of the scope and objectives of the research

- Elaboration of the research methodology
- Discussion of the nature and significance of the anticipated results.

An extensive literature review is not needed. The proposal must be submitted and approved, and the oral presentation to the Department completed, by the end of the 4th semester of residency. The decision to approve the thesis proposal will rest solely with the Advisory Committee. Therefore, students should meet with the Advisory Committee as soon as possible to obtain approval for the thesis topic. One re-submission is permitted in the event that the initial proposal is not approved. This must take place within 2 months of the first attempt

THESIS

University of Guelph regulations regarding the PhD thesis state the following:

Each candidate shall submit a thesis, written by the candidate, on the research carried out by the candidate on an approved topic. The thesis is expected to be a significant contribution to knowledge in its field and the candidate must indicate in what ways it is a contribution. The thesis must demonstrate mature scholarship and critical judgment on the part of the candidate and it must indicate an ability to express oneself in a satisfactory literary style. Approval of the thesis is taken to imply that it is judged to be sufficiently meritorious to warrant publication in reputable scholarly media in the field.

These regulations permit different kinds of theses. Two options for preparing the thesis are available to PhD students in the Department of Geography: the dissertation, and the manuscript option. Expectations regarding the quality, intellectual rigour and scope of the research are the same for both options. In both options, the thesis must be a coherent document that provides a complete and systematic account of the research.

DISSERTATION OPTION

The dissertation is a document in monograph form, usually between 150 and 200 pages in length. Normally it has the following elements: problem context for the research; purpose and objectives; literature review; research methods or approach; findings; discussion and conclusions; references; and, if appropriate, appendices. Additional format requirements are specified by Graduate Studies.

An important strength of the dissertation is its wholeness: the student's research is presented in a stand-alone document. Additionally, the length of the dissertation allows for a full exploration of a problem and pertinent literature in a book-length document.

MANUSCRIPT OPTION

In the manuscript option, the thesis will comprise the following:

- An introductory chapter that outlines the problem context for the work, establishes its purpose and objectives, and explains how the manuscripts presented in the body address the purpose and objectives.
- Manuscripts (normally three) that present research findings. Typically these will be manuscripts for refereed journals, but other formats, such as book chapters, may be appropriate. The manuscripts may be ready for submission, submitted, in press, or published.
- A concluding chapter that outlines the principal findings of the total research effort. These conclusions must reflect the work reported in the manuscripts.

References cited in each manuscript, and in the introductory and concluding chapters, can be included at the end of each manuscript or chapter, or they can be consolidated at the end of the thesis. Appendixes may also be included as part of the thesis.

The entire thesis must be formatted according to the requirements of Graduate Studies. All chapters, including those presenting previously published work, must use a consistent format, and must be continuously paginated.

The following are other requirements for the manuscript thesis option:

- An important principle that must be followed in developing the manuscript thesis is that the entire document (especially the introductory chapter, manuscripts, and concluding chapter) will comprise a conceptual "whole". Thus, the manuscripts should relate to the overall purpose of the PhD research program and its objectives. It is not acceptable for a student and his or her advisor to work on separate "projects" during, or outside of, the PhD program, and then submit manuscripts relating to these projects for the thesis.
- The manuscripts must be dominated by the intellectual effort of the student. Members of the advisory committee and others involved in the research may, as appropriate, be listed as authors on the manuscripts. However, the manuscripts must be written by the student, as reflected by the fact that the student normally will be the first author on each manuscript.
- Where multiple authorship occurs, there must be a preface statement in the thesis outlining the roles of the respective authors, and clarifying the extent and nature of the contribution of the thesis author. Co-authors must sign the statement to indicate that they are in agreement with the evaluation of the roles and contributions of the various authors.
- In no case can a co-author serve as an external examiner for the thesis.
- When previously published, or in press, work is reproduced in the thesis, waivers from copyright holders are required. These should be included as an appendix.