

PH.D. QUALIFYING EXAMINATION IN BIOLOGY

Guidelines for Faculty and Students

The Ph.D. qualifying exam in Biology (QE) consists of a written proposal, an oral presentation, and an oral examination. This document is meant to assist students, supervisors, examiners, and the Chair of the examination in carrying out the QE.

Purpose of the QE

The QE is a formal evaluation of the student's ability to proceed to the attainment of the Ph.D. It is not a "comprehensive" examination, in so far as this term implies that all areas of biology will be covered. Rather, it is intended that the examination will focus on the subject of the student's proposed research. The relevant background knowledge in this area, as well as in allied areas, will be ascertained. The oral examination will usually cover a combination of technical and strategic issues as well as substantive knowledge. Although the QE is not intended as an assessment of the student's research accomplishments in the Ph.D. program, those students who have accumulated useful results should present them. Questions arising from these results may then form part of the examination. The student will be evaluated on the following criteria considered relevant to their preparedness for the Ph.D.:

1. Originality of ideas
2. Practicality of approach to the research problem
3. Depth of understanding of the research field
4. Grasp of relevant allied research areas
5. Potential for scholarship

Logistics

The Exam must be held within 8 months of the start of the Ph.D. program for students who have transferred from a Biology M.Sc. program, or within 15 months of the start of their program for students who are beginning a new Ph.D. program.

The Examining Committee consists of the Supervisor, the other Supervisory Committee members, and an additional member suggested by the Supervisor and approved by the Graduate Training Committee (GTC). The committee must also include a member of the GTC who will act as Chair of the Examining Committee. The role of the GTC Chair is to ensure fairness to the student and to uphold the standards of the Department. The Chair can ask questions and has a vote. The final QE evaluation is based upon the written proposal, an oral presentation of the proposal, and the oral examination.

Written Proposal

Candidates must submit a thesis proposal at least 7 days prior to the examination. It is the student's responsibility to provide each member of the Examining Committee with a copy, as well as Ancil Gittens in the graduate office. The thesis proposal should address the relevant background, the specific questions to be asked and their significance, the approach and methods, results already obtained, and the anticipated schedule. The proposal should be no more than 10 double-spaced pages (12 font). This limit does not include tables, figures, figure legends, bibliography or the planned timeline to complete work. Committee members will not be responsible for reviewing text in excess of the page limit. The written

proposal may include preliminary results if available but must address the whole scope (all chapters) of the projected thesis.

The proposal serves two purposes. First, it defines the research area and thus forms a basis for questioning. Second, it is itself part of the evidence upon which a final evaluation will be made. For these reasons, it should be written with care. Please see the additional tips on proposal writing in the document titled “QE Expectations and Advice” (weblink available on Biology Graduate Studies webpage).

Oral Presentation

The QE begins with the student making a brief verbal presentation of the research proposal (a maximum of 20 minutes). The oral presentation can include preliminary results. It is the responsibility of the Chair of the QE to keep time, and the Chair may ask the student to stop speaking if the time limit has been exceeded. As with the written proposal, the oral presentation defines the research area, forms a basis for questioning, and is part of the evidence upon which the final evaluation will be made.

Oral Examination

After the oral presentation, the Examination Committee questions the student. The Chair of the exam will determine the order of questioning, which typically starts with the additional examiner and concludes with the supervisor. The Chair may also question the student. Each examiner typically questions the student for 10-15 minutes per round; it is common for there to be at least 2 rounds of questioning. It is the responsibility of the Chair to keep time during questioning, to interrupt questions that are ad hominem, and to ensure that the student alone answers the questions.

Evaluation

After the questioning, the student will be asked to leave the room while the committee reaches a decision. There are two possible evaluations: (1) satisfactory, or pass and (2) unsatisfactory, or fail. The Chair will begin the deliberation by asking each committee member to submit a secret straw ballot indicating his/her assessment of the student's performance. The committee will then discuss the strengths and weaknesses of the oral and written portions of the examination. A decision should be reached by a consensus of the committee whenever possible.

In the event that no consensus is apparent, the Chair will call for a vote to be taken by a secret ballot. The Chair has a vote. A majority vote of the committee members is required for all decision outcomes, and significant weaknesses identified during discussion should be recorded in the Report of the Examining Committee, after the ballots have been tallied. However, the Chair reserves the right to defer any decision if he/she believes that either fairness to the student or the standards of the Department are being compromised. The Chair will then bring the case to the GTC for discussion.

In the event of a Pass (Satisfactory)

If the consensus of the committee is a pass, the committee will then summarize the strengths and weaknesses of the performance in the Report of the Examination Committee and a copy of this report will be given to the candidate. The student will receive a Pass on their transcript for BIOL 700 and

continue with the Ph.D. program.

In the event of a Failure (Unsatisfactory)

In the event of a failure, the student is permitted one repeat of the examination. The criterion for failure is *unsatisfactory performance in two or more of the following*: written proposal, QE presentation, oral defense, originality of ideas, practicality of approach to the research problem, depth of understanding of the research field, grasp of relevant allied research areas, and/or potential for scholarship. The student must be informed in writing that he/she has failed and must be informed of the exact nature of the repeat exam. The repeat exam will consist of the oral exam and at least one other component of the original examination: a written proposal and/or an oral presentation. Which elements are included in the repeat exam is at the discretion of the Examining Committee. For example, a new written proposal may or may not be required. To ensure fairness to the student, the additional member can be replaced by another member with expertise in the student's field of study, to be selected by the Chair of the Graduate Training Committee (GTC), not the QE Chair. The repeat exam must take place no later than 3 months after the date of the original exam. The Chair for the repeat exam, assigned by the GTC, will convene the exam and derive a consensus Pass or Fail based on the Examining Committee's assessment of the student's performance. In the event of a second failure, the student will be asked to withdraw from the Ph.D. program.

If the student has demonstrated weakness in one or two limited areas, the examining committee will request that the weaknesses be addressed by the supervisory committee. For example, the student may be asked to write an essay or a review on a specified subject, or revise the thesis proposal; and the supervisory committee must meet within 6 months of the qualifying exam. This will be communicated to the student in writing on the QE exam report. It should be noted that if student receives two unsatisfactory ratings on supervisory committee meetings, the student may be asked to leave the program.

Relationship to Supervisory Committee Meetings

For some students, it may be appropriate to allow the QE to serve as a meeting of the Supervisory Committee (SC). This might be so, for example, if the QE occurs near the end of an academic year in which the SC has not yet met. The Supervisor and the SC members should decide, at the end of the examination, whether the QE might usefully serve as a meeting of the SC. If the QE occurs early in the year, or if there appear to be unresolved issues relating to the research strategy, or concerns about the student's rate of progress, then the QE should not be considered as a meeting of the SC. If the student and the SC members agree, the report form for the QE submitted to the Graduate Coordinator should indicate that the QE will also serve as an annual SC meeting.

Student's Name: _____

Date: _____

PH.D.QUALIFYING EXAMINATION REPORT OF THE EXAMINING COMMITTEE

The original of this report is to be given to the Graduate Studies Coordinator. One copy is to be given to the student.

Strengths of the performance (including thesis proposal):

Weaknesses of the performance (including thesis proposal):

Evaluation:

___ Satisfactory

___ Unsatisfactory

This examination will substitute for the student's annual supervisory committee meeting: Yes / No

Unsatisfactory - In the event of an unsatisfactory performance, please see the Graduate Studies Coordinator for an additional form.

Print Names Below

Signatures

Chair (GTC member)

Thesis Supervisor

Member of Supervisory Committee

Member of Supervisory Committee

Additional Member

Minority (dissenting) opinions may be expressed below. If it is desired that the comments be confidential, they may be omitted from the student's copy.