

# Standards and Procedures

## The Qualifying Examination

### Purpose

To prepare the student for thesis research.

### Overview of Qualifying Examination Format

The Qualifying Examination is composed of two parts. First the student must prepare and orally defend a short one to two page proposal abstract. The abstract meeting helps the student to prepare for the full qualifying exam by providing preliminary feedback on the proposed research and experience in the oral defense of a research topic. This oral defense is not graded, but is intended to be instructive. In the second phase of the qualifying examination, the student must orally defend the complete research proposal. This exam will have three possible outcomes:

Pass – Enter full thesis research

Fail – Academic withdrawal from GSBS

Retest – Repeat oral defense within 2 weeks. Exceptions to this schedule require explanation and recommendation by the PI and Program Director and approval of the Dean.

The outcome of the retest is Pass or Fail.

### Proposal Topic

Graduate students are expected to take an active role in designing their thesis research. To promote early initiation of this active role, students are encouraged to prepare a qualifying proposal based on their thesis research. However, the student, in consultation with the PI, may choose a non-thesis-based topic.

### Goals

The student will learn to develop a research proposal in a given area that identifies:

1. The problem/hypothesis to be tested.
2. Why the problem is important.
3. How the hypothesis will be tested and why each specific approach is selected.
4. What other approaches might be used (if any)
5. Expected results
6. What future experiments will be done should the hypothesis stand or fall.

### Requirements

Adequate prior academic performance in the Core Curriculum and at least 2 advanced topics courses.

## **The Qualifying Examination Committee (QEC)**

The student and the PI select a QEC that is most appropriate for the proposal topic. The QEC may also serve as the Research Advisory Committee (RAC). The QEC is composed of a minimum of 3 members and a maximum of 5 members, in addition to the thesis advisor. One member of the QEC should be designated Chair. The Chair of the QEC cannot be the thesis advisor. Once a QEC has been designated, the names must be sent to the GSBS office for approval (via Darla Cavanaugh, IGP Administrator).

## **Deadlines (2017)**

Student defends proposal abstract before April 3rd

Student submits written proposal to QEC before April 24th

Student defends the proposal 2 weeks following submission

Exceptions to this schedule require explanation and recommendation by the PI and Program Director and approval of the Dean.

## **Guidelines for the Abstract Meeting**

The written abstract should be 1-2 pages in length and should describe the (1) background, (2) significance, (3) hypothesis to be tested, and (4) specific aims. Specific aims should include a brief description of the basic methodologies that will be used.

The student is free to discuss the abstract proposal with the PI, and it is assumed that the PI will play a positive role in developing the abstract.

A draft of the abstract should be submitted to the QEC Chair for approval. The abstract does not need to be submitted to the entire committee. Once the abstract is approved, a meeting date should be scheduled by the student.

The Abstract defense is a mini-exam in which the student orally presents and defends the proposed research. The presentation should include background and significance and a brief outline the specific aims. Preliminary data that supports the aims can also be provided as part of the background section.

The thesis advisor/PI is encouraged to attend the Abstract meeting; however, the PI should not be an active participant in the discussion or questioning.

Following completion of the abstract meeting, the Chair of the QEC and the thesis advisor will summarize the strengths and weaknesses of the abstract defense. Expectations for the second phase will be discussed (i.e. how the proposal can be strengthened; strategies that the student should employ to improve performance, etc...).

## **Guidelines for the Qualifying Proposal/Examination**

The written proposal should be a maximum of 10 double spaced pages, non-inclusive of figures and references. Font size should be kept reasonable – 12 point is preferred. The proposal format is based on a NIH grant application, and is composed of the following sections: Specific aims (1 page), Background and significance (2-3 pages), Research design and methods (6-7 pages). Following completion of the abstract meeting, the advisor and student should not discuss the proposal, and the advisor should not participate in preparation of the written proposal.

During the qualifying exam, the advisor/PI may not be present.

Examination questions are to be restricted to the general area circumscribed by the topic of the written proposal.

Although the written proposal is quite short, the student is expected to have a comprehensive understanding of the topic background and should be able to fully describe possible pitfalls, experimental outcomes, and alternative methodologies for each of the specific aims.

If the QEC votes for a re-test, this must be an oral examination. Proposals that are poorly written should be identified prior to the examination date, and the exam postponed until the situation is corrected. Such action should only be taken in extreme situations and should not be used for minor corrections/modifications.