

The Qualifying Exam
Procedural Steps

Revised May 2010

Two important notes: a) the Oral Exam request form must be received by the Graduate School by a date within 6 weeks of the beginning of the Fall semester, and b) the Oral exam must be held by the end of the Fall semester (and please DO NOT aim for the last days of the semester). If you miss either of these two deadlines, it will mean that your mentor will have to pay an extra semester of very expensive tuition for you out of their research funds.

1) The students write proposals based on what they plan to do in their respective labs. You should start by generating a specific aims page, in consultation with your mentor, in which you give a brief summary of the research background, hypothesis, and the experiments you propose to test the hypothesis. Once your mentor approves the Specific Aims page you can then write the full proposal. The full proposal must follow the format for an NRSA--10 pages max, excluding references. **It is recommended that the committee members receive the full proposal during the month of July. However, This document must be given to all committee members by August 15th at the absolute latest.** If this deadline is not met then the student will no longer be considered to be in good standing with the department and may be subjected to sanctions, to be determined by the committee in consultation with the DGS.

2) The proposal has to be given to each member of the committee. A majority of the committee must approve it (agree that it is ready to be defended). If a majority do not approve, then the committee must meet (phone or email is also fine) and come to some agreement on a course of action--ask the student to rewrite it all or just a part, get additional guidance from their mentor, whatever. If the proposal is deemed acceptable, then:

3) Each committee member submits a written question to the student's mentor. The question should be based on the proposal but can take any form: open book, closed book, 1 hour, 1 day, whatever the questioner wants.

4) The student's mentor collects the questions and administers the exam following the directions set by the questioner. Due to the varying nature of the questions, the student should be allowed to finish one question (and, in extreme cases, get a good night's sleep) before receiving the next question. The written portion of the exam could take a week if each questioner gave an open book question that needed a full day to answer.

5) The answers are returned to the respective questioner who grades the question pass/fail. A majority of passes allows the student to take the oral. If a majority fail to pass the written, the committee will need to come to some agreement as to what is needed next--re-do the written, more coursework, outside reading, whatever is thought to be needed to bring the student up to a reasonable level of competence. Depending upon how long that interval is, the student may need to rewrite the proposal and start all over. If a majority of committee agree to pass, then:

6) The student can schedule the oral exam. All members of the committee have to be present for the exam. The exam must be administered during a period in which class is in session (there are a number of blackout periods, mostly in the summer, during which an exam can NOT be

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scheduled). To schedule the oral exam, log on to the Graduate School's web page for [Doctoral Degree Candidate Forms](#). Here you will be able to complete the form and submit your formal request to the Graduate School online. It will then be routed via email to the DGS for approval. The Graduate School must receive this form AT LEAST TWO WEEKS BEFORE THE ACTUAL EXAM DATE. The graduate school will send a card that I will give to your mentor which needs to be available for all members of the committee to sign at the time of the exam. PLEASE DO NOT PROCEED WITH AN ORAL EXAM WITHOUT THIS CARD OR YOU WILL ENTER THE HELL OF GRADUATE SCHOOL REGULATION LIMBO.

7) During the oral exam, the committee will ask students questions based on the proposal initially, but the questions may veer off into related (sometimes distantly) areas of biochemistry about which the student is expected to be knowledgeable (this often included material from courses the student is known to have taken). The Department has imposed a voluntary "gag rule" on the student's mentor. The mentor should be present at the exam but remain mute. This was imposed to prevent problems in the past in which the mentor felt compelled to answer questions for the student. It is legitimate for a committee member to ask the mentor whether a statement made by the student is correct or not, but the mentor should not provide information that would help the student answer the question.

8) A student passes the oral if a majority of the committee sign and check the pass box on the exam card. If the student does not pass, then the committee needs to decide what the student needs to do to improve. A second oral exam cannot be scheduled within four months of the first exam, nor longer than one year after. A third exam is not permitted; therefore, a student who fails an oral exam twice must leave the graduate program.

Final note: Once the student passes the qualifying exam, the clocks starts ticking. You have 5 years from that semester (or summer session) in which to complete everything needed for graduation (this is more than just passing the dissertation defense). If you do not finish within 5 years, you have to petition the graduate school for an extension (rarely granted without a good reason). If you are granted an extension, you will need to retake the qualifying examination as it is administered at THAT time.

The Proposal

The proposal is usually broken down into 5-6 sections as follows:

- Abstract
- Specific Aims
- Background & Significance
- (Preliminary Results)
- Experimental Approach
- Bibliography

The entire proposal (excluding the abstract and bibliography) should be no more than 10 pages long. This page limit includes any figures that the proposer wants to include. The proposal must be in 12 point or greater type with 3/4 inch margins. It can be (and usually is) single spaced. Keep the proposal as free of jargon as possible. If you must use terms that are not likely to be

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understood by the average worker in your general field (i.e., the members of your committee), define them when they are first introduced.

Abstract

This is a half page summary of the entire proposal and should be written last. It gives the reader an overview of what is contained within. It does not count in the 10 page limit.

Specific Aims

This is a short statement of the major hypothesis or hypotheses to be tested and how they relate to the long term goals of your lab. These aims should be in the form of numbered, definitive statements of realizable goals. If multiple aims are to be presented, subsequent aims should not be dependent upon earlier aims (they should be independent, but related explorations). Only a minimum amount of explanatory material should be included (that's what the rest of the proposal is for). This section should be no more than a page long, usually a half-page will suffice.

Background and Significance

This section describes the work leading up to the problem to be studied. It should specifically identify a "gap" in the current knowledge that needs to be filled. It should also explain why filling this gap is important (why anyone should care). All statements of fact must be referenced, preferably by papers in the primary literature (avoid review articles except for those "facts" that have been established by a large number of independent works).

Preliminary Results (optional)

This section contains your data, not that of your co-workers. (Co-worker data would go in the Background section, if not published, cite it as a personal communication). If you have data that significantly impacts on the proposal include it here. This section is optional, but often helpful.

Experimental Approach

This section describes how you are going to do the work. It should NOT be a listing of experimental protocols. It should explain the approach you are going to take, why it is better than obvious alternative approaches, what kind of results are expected, how the expected results impact your hypotheses, what types of problems you might expect to encounter and how you could get around these problems. The emphasis in this section is on explanation and analysis, not a listing of methodological detail. For well-established techniques, a reference to a paper demonstrating or using that technique may be sufficient.

Bibliography

This section also does not count in the page limit, but should consist of a listing of all the references cited in the proposal, using a standard format. The references should include the complete author list and title of all papers, as well as year, journal name, journal volume, and complete page numbers.

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