

## QUALIFYING EXAM GUIDELINES

***What does the qualifying exam consist of?*** The qualifying exam consists of writing an NIH-style proposal on your research topic and defending it in front of a faculty committee.

***When should I take the qualifying exam?*** The exam must be taken at the end of your second year (i.e. after the first year in your advisor's laboratory). The written proposal must be completed by **December 1** of the second year or you will not be allowed to register for the following semester. The proposal can be defended after December 1, but no later than Feb 1.

***Who should be on my proposal committee?*** A student's proposal committee should consist of three Sackler faculty members and your thesis advisor (a total of 4 members). At least half of the committee members should be from the Microbiology Department, although members from other departments may be needed to round out your committee. Ideally, the members of your committee should also have some knowledge of your field of study. The make up of the committee should be discussed with your thesis advisor. The proposal should be handed out 2 weeks prior to the thesis defense date (no exceptions).

***What is the format for the written proposal?*** The proposal should be modeled after an NIH grant application. It should be no more than 12 pages double-spaced twelve point font and 1 inch margins. Not included in the page limitation are the preliminary results, which may vary depending on the number of figures, and references. A complete figure legend is expected to accompany each figure. The thesis proposal should be realistic. It should be focused and is expected to include what can be accomplished in a three-year period. **Proposals that do not adhere to these guidelines will not be accepted for oral defense.**

The proposals should have an introduction of approximately 4-6 pages providing background information that cogently discusses the current state of knowledge in the field and provides a context in which the goals of the proposed experiments are formulated. This will be followed by a one page Specific Aims section that outlines succinctly the long range goals of the proposed work and a description of the specific short term goals that include the specific experimental approaches that will be used to achieve these goals.

The next section of the thesis proposal will present preliminary results. **Note, however, that students need not have any significant results to submit the thesis proposal for the qualifying examination since it is considered as an intellectual exercise.**

The main section of the proposal, termed "Experimental Procedures", includes a coherent (i.e. rationally ordered) presentation of the proposed

experiments. This section may include additional background information not given in the introduction to illuminate the rationale for the specific experiments proposed. The experiments themselves should be clearly described and appropriately referenced for methodological details rather than providing all the details in the written text. The student may be asked, however, in the oral exam to provide more details.

For each experiment proposed, you should discuss the possible outcomes (expected results) and their interpretations. Importantly, you should discuss difficulties you expect to encounter. You should show that you are aware of the limitations of the proposed experimental approaches and suggest potential alternatives if the anticipated results are not obtained. Students should also discuss the priority of experiments to be performed.

***What is the length of the oral exam and what is expected of the students?***

The oral exam should take between 1-2 hours. The student should give a Powerpoint presentation that serves to focus the attention of the committee on those aspects that the student feels are most important. The student and not the advisor should prepare figures. Primary data (e.g. autorads) are also acceptable as long as they are labeled properly. Remember that poor visuals will detract from your presentation.

During and after a brief introduction and presentation of pertinent preliminary results, the examiners will question the student, attempting to assess the depth of knowledge in the area of the proposal, understanding of the experimental approaches and his/her ability to rationally analyze a problem or issue. Although your advisor will be present during the exam, the candidate is responsible for answering all questions on background, preliminary results and future directions posed by the committee. Your advisor is a silent observer.

***How are students evaluated?*** There are three possible outcomes to the thesis proposal/qualifying exam that can be recommended by the committee:

**Pass:** The committee feels that the student has met expectations and passed the exam.

**Conditional Pass:** The committee feels that the proposal needs improvement. The student will have 4 weeks to rewrite the proposal and resubmit it to the committee for approval. No oral exam is required, if the committee approves the rewritten proposal.

**Did Not Pass:** The committee feels that there are very serious problems with the written proposal and/or oral defense. The committee will consult with the student's thesis advisor and the graduate student advisor as to whether the student should be given an opportunity to rewrite the proposal or be terminated from the program. This decision will be based on the student's prior performance in the program including coursework, rotations, and the evaluation of the

student's thesis advisor. If the student fails the exam and the student has performed adequately in coursework, rotations and has the support of his/her thesis advisor, he/she will be given an opportunity to rewrite the proposal and retake the oral exam a second time within the next 4-6 weeks. Student's who fail the exam a second time will be terminated from the program.

The committee will appoint a chairperson who will voice the recommendations of the committee and liaise with the graduate adviser. The chairperson is responsible for a written evaluation of the candidate's performance and committee decision. The committee members and the student should read and approve the evaluation and a copy should be forwarded to the Lizabeth Greene in the Sackler office.

***POST-PROPOSAL FOLLOW-UP***

Committee should meet every 6-9 months to review the student's progress and provide guidance. It is the responsibility of the student to keep track of this and schedule meetings accordingly.