QUALIFYING EXAM GUIDELINES

Microbiology Training Program – New York University School of Medicine

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

• When should I take the qualifying exam?  The qualifying exam must be taken between September 1 and February 1 of your third year (i.e., shortly after completing your first year of thesis research in your advisor's laboratory). The date of the exam must be set by December 1; otherwise, you will not be permitted to register for classes the following semester.

• Who should be on my qualifying exam committee?  A student's qualifying exam committee should consist of three faculty members and your thesis advisor (a total of four members). This committee will subsequently serve as your thesis advisory committee. At least three of the committee members should be Sackler faculty, and at least two (including the committee chair) should be from the Microbiology training program; members from other programs or another university may be included to round out the expertise of your committee. Ideally, each committee member should have some knowledge of your field of study. The make-up of the committee should be discussed with your thesis advisor.

• 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, 12-point font, and 1-inch margins). Not included in the page limitation are the preliminary results, figures, and references. A complete legend should accompany each figure. The thesis proposal should be focused and realistic, with goals that can be accomplished in a three-year period. Proposals that do not adhere to these guidelines will not be accepted for oral defense.

The proposal 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 to understand the goals of the proposed experiments. This should be followed by a one-page “Specific Aims” section that succinctly states the long-terms goals of the proposed work and lists specific short-term goals.

The next section of the thesis proposal should present “Preliminary Results”. Note, however, that students need not have any significant results to submit the proposal for the qualifying exam because it is considered an intellectual exercise.
The main section of the proposal, termed the “Research Plan”, should be a coherent (i.e., rationally ordered) presentation of the proposed experiments. To illuminate the rationale for specific proposed experiments, this section may include additional background information or preliminary data not already provided. The experiments themselves should be clearly described and appropriately referenced for methodological details. Although excessive methodological detail should be avoided in the written proposal, the student may be asked to explain such details in the oral exam.

For each proposed experiment, the student should discuss the possible outcomes (expected results) and their interpretations. Importantly, (s)he should discuss difficulties that may be encountered. The proposal should demonstrate an awareness of the limitations of the proposed experiments and suggest alternative approaches that could be used if necessary. Students should also prioritize the experiments to be performed.

The written proposal must be submitted to the members of the exam committee at least two weeks prior to the qualifying exam date (no exceptions).

• What is the length of the oral exam, and what is expected of the students?
  The oral exam will normally take 1-2 hours. The student should give a PowerPoint presentation that summarizes the written proposal (introduction, specific aims, preliminary results, and research plan) and focuses the attention of the committee on those aspects that the student feels are most important. The student and not the advisor should prepare the PowerPoint figures. Remember that poor visuals will detract from the presentation.

  During the presentation, the examiners will pose questions in order to assess the student’s depth of knowledge in the research area of the proposal, understanding of the experimental methodology, and ability to engage in rational scientific analysis. The student will be solely responsible for answering all of the questions posed by the committee. Although the thesis advisor will be present during the exam, (s)he will be a silent observer.

• How are students evaluated?  The qualifying exam has three possible outcomes:

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

  Conditional Pass: The committee feels that the written proposal or oral defense fell somewhat short of expectations. As a remedy, the student will have four weeks to rewrite the proposal and resubmit it to the committee for approval. No additional oral exam will be 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 retake the exam or be terminated from the program. This decision will be based on the student’s prior performance in the program, including coursework, rotations, thesis research, and an evaluation by the student’s thesis advisor. If the student fails the exam but has performed adequately in coursework and research and has the support of his/her thesis advisor, (s)he will be given an opportunity to rewrite the proposal and take the oral exam a second time within the next 4-6 weeks. Students who fail the exam a second time will be terminated from the program.

The committee will appoint a chair who will communicate the recommendations of the committee and liaise with the graduate advisor. The chair is responsible for a writing a report describing the candidate’s performance and the committee’s decision. The committee members and the student should read and approve the report, and a digital copy should be forwarded to the graduate advisor, to Lisabeth Greene in the Sackler office, and to John Tortorella in the Microbiology office.

• Future meetings of the thesis committee
The thesis committee should meet at least once every 12 months to review the student’s progress and provide guidance. It is the responsibility of the student to keep track of the passage of time and to schedule such meetings accordingly.