**MMMP QE REQUIREMENTS**

1. Overview

The Qualifying Exam is an important academic checkpoint of the Program in Molecular Microbiology and Microbial Pathogenesis. Examining committees are charged with evaluating whether graduate students are prepared and qualified to carry out doctoral thesis work, as well as whether they have sufficient depth and breadth of knowledge.

The MMMP exam consists of both a written document and an oral exam. In preparing the written portion of the exam students will review an area of literature pertinent to their thesis research, develop a well-justified experimental project, and generate a polished final document. In the oral portion of the exam students should demonstrate their proficiency in discussion of their area of interest and proposed project as well as the supporting literature, relevant experimental approaches, and appropriate general knowledge.

The topic area of the written document and oral examination should be related to the student’s thesis research, so that the student becomes immersed in literature relevant to his or her dissertation project early in graduate training. The proposed project should be an original idea that is innovative and significant to research in the field. It should not be a project that has been proposed for funding by the PI or other lab members. If the project is an extension of ongoing studies in the lab, it should be a significant and meaningful departure into new areas initiated by the student. However, students should bear in mind that this is an academic exercise and should not be based on data they have obtained in the laboratory. Rather, the hypothesis for testing needs to be based on work previously published in the field.

**Students are expected to develop their project ideas independently and to write all required sections of the written component of the exam.** They are, however, encouraged to discuss their original ideas with their PI, lab-mates, and other colleagues. Advice from faculty mentors should occur in the form of verbal input on the topic and faculty members should not have access to the written document, nor should they provide any direct input on the writing or editing of the document, including the Specific Aims. Additionally, if the student gets critiques on any part of the written document in the form of editing from others, these must be rewritten in the student’s own words prior to submission. Students are reminded of the many web resources designed to advise scientists on writing Specific Aims and research proposals, and they are encouraged to obtain feedback from other members of the scientific community.

2. Exam Components

The exam consists of a written proposal on a topic of the student’s interest and an oral exam. Details for the formatting the written proposal, as well as advice on organization, are found in the QE Proposal Guidelines document. In brief, the proposal should consist of three parts: a **Specific Aims** page (1 page), a brief **Topical Review** of the field (6 pages), and a **Project Description** (4 pages). Within the topical review, the student should highlight 10 primary papers and denote their major contribution. Evaluation of the written component will be based on the thoroughness of the literature review, as well as strengths of the proposed project.

Once the Aims have been approved by the Program Director, a committee of four faculty members will be chosen to examine the student on their chosen topic. The committee will provide written feedback on the Aims, and may require revisions to be made by the student. Once
the Aims have been approved, the student will complete the written proposal and resubmit a final
document to the committee prior to the oral exam. The oral exam will be a closed exam of ~ two
hours. The student should prepare a presentation of no more than 10 minutes total; this may
include (but does not require) a presentation. The presentation should summarize the aims and
briefly outline the proposed project that has been developed in the written document. The
committee may interrupt with questions but total time the student spends in “presentation” may not
exceed 10 min (i.e. answering questions or clarifications does not count). Subsequent discussion,
moderated by the Chair, will proceed for the remainder of the time. This discussion may include,
but is not limited to, aspects of the written document, the ten highlighted citations, and the
proposed project. The committee will also use part of this time to question the student on general
knowledge, relating to the background articles or chosen topic. The student will be excused to
allow deliberation of the committee. The committee will score both the written and oral
components of the exam and make recommendations to the Steering Committee, which will make
the final decision on the exam outcome. At the discretion of the Chair, the oral exam format may
be modified if needed to fully evaluate the student.

3. Outcomes
Results will not be communicated to the student on the day of the exam, but will be available
shortly thereafter following the decision of the Steering Committee. A student who passes both the
written and oral components of the exam will have successfully completed the QE. A student
considered to have failed either the written or oral part of the exam will be assigned a ‘fail’ and a
repeat examination will be scheduled. For deficient written proposals, the student will submit a
revised document, addressing the deficiencies, within 2 weeks of the original exam. For deficient
oral exams, the repeat exam will be scheduled within 2 weeks of the original exam. To successfully
complete the QE, the student must receive a pass on both components, as determined by the
Steering Committee in consultation with the examining committee. Students who are assigned a
second failing grade on either or both parts of the exam will be dismissed from graduate school.

4. Timeline

The Qualifying Exam must be completed by the end of the first semester of the second year of
graduate studies. This will be accomplished by the following timeline:

QE Schedule for Fall 2015

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
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<tbody>
<tr>
<td>Submit Aims PD</td>
<td>Sept 18</td>
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<tr>
<td>Submit Aims Committee</td>
<td>Sept 25</td>
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<tr>
<td>Aims Approved</td>
<td>Oct 16th</td>
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<tr>
<td>Submit Proposal</td>
<td>Nov 13th</td>
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<tr>
<td>Revision</td>
<td>Nov 27th</td>
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<tr>
<td>Writing time</td>
<td>Dec 1-15th</td>
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<tr>
<td>Faculty read</td>
<td></td>
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<tr>
<td>Exam</td>
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On or before September 18th the student should electronically submit to the Program Director and
Program Coordinator the Specific Aims page for the written portion of the exam together with the
signed PI Affirmation form (Appendix I). The Specific Aims page will not be considered complete without the scanned PI Affirmation form. The Specific Aims page should follow the guidelines detailed in QE Proposal Guidelines. The Specific Aims will be reviewed by the Program Director.

A. An exam committee, appointed by the Program Director, will receive the Specific Aims on September 25th. Feedback from the committee will be communicated to the student by the Committee Chair, who will contact the student directly with recommendations for any necessary revisions. The student will be responsible for revising the Specific Aims and resubmitting them to the entire committee. This process will continue until the Committee Chair informs the student that the Specific Aims have been approved. It is expected that this process will be complete by October 16th.

B. After Specific Aims approval, the student will have 3-4 weeks of protected time to prepare the written document and submit it to the committee members (Cc to the Program Coordinator). This document should be submitted no later than November 13th.

C. Committee members will have 2 weeks to review the document and provide the committee Chair with their critiques of the written document. Critiques will be distributed to the student prior to the oral exam.

D. The oral exam will take place during the first two weeks of December.

E. Students will be notified by the Program Director, after a meeting of the Steering Committee who will make the final decision about the exam outcome.

F. Students who do not adhere to timing or other guidelines for the exam may receive a failing grade.
PI Affirmation Form

Student: _______________________________________________________________________

Thesis advisor (PI): ______________________________________________________________

Title of project: __________________________________________________________________
______________________________________________________________________________

PI Affirmation:

I confirm that the student listed above has written this document completely independently and that no part of the document reflects edits made by the faculty member or another person. The proposed project is also based on original ideas generated by the student, although input may have been received from others including the advisor.

PI signature: __________________________________________ Date: ____________________

Student signature: _______________________________________ Date: ____________________