Albert Einstein Graduate Program in the Biomedical Sciences

The Qualifying Examination

2006 Student Guidelines

1) A program-wide uniform qualifying examination is held at the end of the 2nd year Spring term (3rd year in the Program for MSTP students). On recommendation of the Department Chair, a student may defer for one year, as an exception, based on academic gaps, illness, change in laboratory, etc. It is expected that students taking the exam have fulfilled the bulk of core graduate courses and Department requirements.

2) The exam is organized by a parent Qualifying Exam Committee, consisting of representatives from all the Departments and chaired by the Asst. Dean for Graduate Studies. The number of Department representatives may vary depending on the number of students taking the examination each year, but must be at least two, to avoid student/mentor conflict of interest.

3) At the end of the 2nd year Fall semester, each eligible student submits a list of 4-8 faculty who he/she feels would be appropriate Exam Committee members, based on the thesis topic. The Parent Committee will confirm the list of students needing exam committees, and will attempt to include at least 2 faculty from the student’s list. The Exam Committee also includes a Department representative from the Parent Committee who acts as the Chair (and must approve the exam committee), and a fourth member chosen from the Einstein graduate faculty. A typical Exam Committee includes at least two members of the student’s Department, but in some cases it will be more appropriate to include faculty from related “working groups”. The mentor is not a member of the Committee, nor is the mentor present at the exam.

3a) The Qualifying Exam must be scheduled by the student for any time in April-May. Exam times and room location are scheduled by the student. The student must make the arrangements and submit a form with the scheduled exam time to the Graduate Office at a much earlier date (to be announced). There may be exceptions that require a minor delay in taking the examination (for example if a student feels it is essential to complete a 2nd year Spring course).

4) During the first half of the Spring semester, all 2nd year students register for and take part in a 6 week workshop on how to write a proposal. This is in essence a science writing course, with practical training to develop focus and clarity. Each student will then write a proposal based on their developing PhD project. The writing phase is limited to 4 weeks (March).
5) Each student submits to his/her committee members, the written document (the proposal) in NIH grant application format, based on the developing thesis project. The project defines a specific hypothesis that is tested by three or more experimental Aims. It is expected that availability of preliminary data will be variable, and therefore no significant preliminary data is required.

The proposal is up to 12 pages including figures, doublespaced, 1 inch margins, 12 pt. font, plus bibliography. The written document must be the independent work of the student, who can seek editorial assistance outside of the mentor. Mentors will sign off to affirm that they have not assisted directly with the written document, although mentors are encouraged to provide feedback to the ideas in the proposal.

References cited within the text of the proposal should be cited as (author and author, year) and listed alphabetically at the end of the proposal (Bibliography or Reference List).

6) The “budding” thesis project provides a scaffold for the exam, but the exam itself focuses on determining whether the student has incorporated the fundamental knowledge needed for proceeding towards thesis research. In addition to knowledge obtained from the coursework and relevant literature, students will also be tested for knowledge of experimental strategies and the ability to think on their feet and across the “pitfalls” (controls, alternative approaches, etc.). An extensive list of representative “mock” questions will be distributed to students and faculty in order to illustrate the types of questions and level of depth that might be expected during an actual exam.

7) One Aim must be developed independent of the mentor, or any other PI (indicated in the Specific Aims by an asterisk). This Aim should still test the hypothesis and will be critiqued for originality and creativity. There will be variability in quality, but the point is to incorporate some ideas from outside the scope of the immediate laboratory.

8) At the beginning of the Qualifying Examination, the student will make an uninterrupted 10-15 minute oral presentation describing the proposal. A PowerPoint presentation is appropriate (but not required) during this initial period in particular to display essential graphics, videos, etc. This is followed by the examination itself, which is free-flowing and at the discretion of the exam Committee, expected to run approximately 90 minutes. The use of a (blank) white board during the examination is appropriate.

9) Following the exam, the Committee will vote: Honors, Pass, Conditional Pass (requiring revision of the written document within one month), or Fail. The preliminary vote is anonymous, to be followed by open discussion among the members, and a final vote. A vote of 3-1 is needed for Pass. With a 2-2 vote, further discussion is warranted but if not resolved, results in Fail. A scale developed by the Parent Committee allows qualitative assessment on several defined areas of the exam (written document, literature review, etc.). The Chair takes notes, and at the end of the exam drafts a summary paragraph incorporating the comments provided by the Committee Members, which will
be provided to the student and the mentor, and forwarded to the Academic Affairs Committee.

10) A comprehensive and objective review of each student’s progress takes place in the summer following the 2nd year (3rd year for MSTP) by the Academic Affairs Committee, taking into account grades received for coursework, the qualifying examination, and laboratory productivity as indicated by the mentor. This review could lead to a recommendation to the Department Chair that a student leave the program with or without a Masters Degree. Students who fail the Qualifying Examination may at this time receive approval to retake the exam the following Spring.