

THE QUALIFYING EXAMINATION

For the Advancement to Candidacy for the PhD Degree

2011 Student Guidelines

A program-wide uniform Qualifying Examination is held at the end of the second year Spring term (third year in the Program for MSTP students). On recommendation of the Program Director, a student may defer for one year, based on academic gaps, illness, change in laboratory, etc. It is expected that students taking the exam have fulfilled the bulk of (but not necessarily all) Foundation graduate courses and Departmental requirements.

Successful completion of the Qualifying Exam marks a student's transition to the independent research phase of his/her graduate training.

I) *Parent Qualifying Exam Steering Committee:* The Exam is organized by the Parent Qualifying Exam Steering Committee, consisting of representatives from all the Departments and chaired by the Director of the Graduate Division. The number of Department representatives will 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.

II) *Qualifying Exam Committee:* At the announced date early in the Spring Semester (see Timeline), each eligible student submits a list of four to eight faculty who would be appropriate Exam Committee members, based on the thesis topic. The Parent Steering Committee will attempt to include as many as possible from the student's list.

The student's Qualifying Exam Committee includes:

- A Department representative from the Parent Committee who acts as the Chair (and must approve the Exam Committee).
- At least one member of the Committee should be from outside the student's home Department.
- A typical Exam Committee may include two or more members of the student's home Department, but in some cases it will be more appropriate to include faculty from related "working groups."
- Role of the Mentor: The mentor is *not* a member of the Exam Committee, nor is the mentor present at the exam.

III) *Scheduling of the Qualifying Exam:* The Qualifying Exam should be scheduled by the student for any time in the designated exam period (usually mid-April to mid-June; see Timeline). Exams should not be scheduled during official school holidays (see Academic Calendar).

- Exam times and room location are scheduled by the student. The student must make all arrangements for the exam.
- The students must submit a form with the scheduled exam date/time/location to the Graduate Office at a specific earlier date (see Timeline).
- Four Committee members *must* be present at the examination. If a member is absent, the Committee Chair will attempt to find a suitable replacement. However, if more than one member is absent, the examination must be rescheduled for the earliest possible date.
- Delaying the Qualifying Exam Date: There may be exceptions that require a delay in taking the examination (for example, if a Committee Chair feels it is essential for the student to complete a second year Spring semester course). If a delay is approved by the Committee Chair, the exam should be completed before the end of July.

IV) *Workshop:* During the first half of the Spring semester, *optional* “Nuts and Bolts” workshops will be provided that is focused around the proposal format, tips in proposal writing, and advice on preparation for the examination.

V) *Qualifying Exam Proposal:* Each student will submit a clear and well-written proposal based on his/her developing PhD project.

The written proposal *must* be the independent work of the student. However, mentors are encouraged to provide feedback to the ideas in the proposal. This should certainly occur before writing starts, but also at the outline stage, and in subsequent discussions. It is expected that the student will seek editorial assistance outside of the mentor.

The proposal is expected to describe the thesis project in which a specific hypothesis is tested by two or three experimental Specific Aims.

The proposal represents a typical NIH student fellowship (NRSA) style, consisting of:

- **2 or 3 Specific Aims**
 - **At least 1 Specific Aim:** Developed after discussions with the mentor about the overarching hypotheses, and the likely directions and outcomes of the proposed thesis research.
 - The proposal *must* include **1 “Independent” Specific Aim**, developed independently of the mentor or any PI. The mentor will likely comment on this Aim, but it should not be something presented to the student directly by the mentor.
 - This Aim should still test the hypothesis and will be critiqued for originality and creativity. It is expected that there will be variability in quality and feasibility of the Aim, but the point is for the student to incorporate some ideas from outside the scope of his/her immediate laboratory.
 - This independent Specific Aim must be indicated by an asterisk (*) in the proposal.

The Specific Aims can be interdependent, but not entirely dependent upon each other.

- **Background and Significance**

- **Preliminary Data** (if applicable); it is expected that the availability of preliminary data will be variable, and therefore, no significant preliminary data is required.
- **Research (Experimental) Design and Methods**
- **Bibliography or Reference List:** The Bibliography is not included in the 12-page count; the proposal should be comprehensive, but concise.

References cited: Any references used within the text of the proposal should be cited as (author and author, or author et al., year) and listed alphabetically in the Bibliography or Reference List at the end of the proposal. In the list, all authors and full titles of papers must be included.

Format of the proposal:

- 12 pages in length, including figures. (The Bibliography is not included in the 12-page count, nor is the title page.)
- Double-spaced, 1-inch margins
- Font: Times New Roman or Arial 11-12 pt.

(For more information regarding the format of the proposal, please refer to the “Format of the Proposal” handout. A link to the format is also available on the Graduate Division’s Qualifying Exam web page.)

Submitting the proposal: Each student submits the written proposal to his/her Qualifying Exam Committee members and to the Graduate Office on or before the designated submission date (see Timeline). In the rare instance in which the exam date is delayed, the submission date may also be delayed, upon recommendation of the Qualifying Exam Committee Chair. No revisions of the written proposal will be accepted after the designated due date for submission as set forth in the Timeline.

VI) “Mock” Qualifying Exams: Students are advised to participate in one or more “mock” examinations, particularly with senior students and postdocs.

- Students are encouraged to seek input and advice from any other source including students, postdocs, faculty not affiliated with their examination, and outside sources.
- Mentors or members of the student’s Qualifying Exam Committee should not participate.
- Students may not approach their own Qualifying Exam Committee members for advice or comment prior to the examination.

VII) Oral Presentation: The “budding” thesis project provides a scaffold for the oral 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.

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 Qualifying Exam Committee. The exam is expected to run approximately 90 minutes. The use of a (blank) white board during the oral examination is appropriate. If necessary, the Chair may stop the exam for a brief discussion, or to allow the student to take a short break.

Please note: Audio and/or video recording of the oral examination is prohibited.

VIII) Grading: Following the exam, the Committee will vote: *Honors* (indicating an outstanding performance, i.e. in the top 10%), *Pass*, *Postponed Decision* (requiring revision of the written proposal within one month of the oral exam date), or *Fail*. The preliminary vote is anonymous, and is to be followed by an open discussion among the Committee members, and then a final vote.

Note: The Chair should summarize the key points of the discussion on the Chair's Summary Sheet, which will be provided to the student and the mentor, and also forwarded to the Academic Affairs Committee.

Committee Decision (Final Vote):

- A majority vote of 3-1 is needed for HONORS
- A majority vote of 3-1 is needed for PASS
- If a 2-2 vote occurs, with 2 Committee members voting FAIL, then the grade for the exam will be FAIL
- If a 2-2 vote occurs, with 2 Committee members voting POSTPONED DECISION, then the grade for the exam will be POSTPONED DECISION
- If a 2-2 vote occurs, with 2 Committee members voting HONORS, then further discussion is warranted. If the vote remains 2-2, then the grade for the exam will be PASS

The student is then brought back into the room and informed of the Committee's decision.

~Please note: Postponed Decision is for revision of the written proposal only, when the oral examination is satisfactory. The revised proposal should be distributed to all the members of the Committee within one month of the oral exam date. The Committee then has seven calendar days to submit final grade to the Graduate Office.

If the oral examination is deemed to be not satisfactory, even if the written document is acceptable, the grade will be FAIL.

Appeal of Examining Committee's Decision: If a student wishes to appeal the decision of the Qualifying Exam Committee, the matter will be considered by the Parent Qualifying Exam Committee. This request must be made in writing to the Director of the Graduate Division, who will schedule a meeting with the Parent Committee. The appeal will either be denied or the student will be allowed to repeat the examination with a new Exam Committee.

IX) "Retake" of the Qualifying Exam: For students who previously failed the Qualifying Exam, the "retake" examination will not be treated as a "rebuttal" of the previous exam that they failed, but rather, be considered a completely new exam independent of the outcome of the previous exam.

X) Academic Affairs Committee Review: A comprehensive and objective review of each student's progress takes place in the summer following the second year (third 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. Students who fail the Qualifying Examination may at this time receive approval to retake the exam the following Spring.

All information regarding the Qualifying Examination can be found on the Graduate Division website at <http://www.einstein.yu.edu/phd/index.asp?qualifying-exam>