

## QUALIFYING EXAMINATION

(or Four Steps to Fame and Fortune. Maybe.)

### Pre-qualifying exam requirements:

- i) Students must take 36 credit hour of graduate coursework before being permitted to take the qualifying examination.
- ii) The qualifying exam process normally occurs in the summer following the second year or the fall of the third year for students that have taken a full course load (9 credits each semester).
- iii) Unless an extension is granted by the Dean of the Graduate School, the student will be dismissed if the qualifying exam is not passed within 5 years of enrolling in the graduate program.

### Qualifying exam steps:

These are to be done in the order written. Pay close attention to the requirements, allow plenty of time to complete each step, and be sure to follow the Graduate School rules for the final step.

*At the discretion of your Doctoral Advisory Committee, steps I and II can be combined into a single step.*

#### **Step I. The dissertation proposal – Background and significance/Specific aims.**

During the second year, each graduate student--in consultation with his/her mentor--develops a topic and direction for a dissertation proposal. These directions are further delineated by the student in a written *Background and Specific Aims*. The *Specific Aims* concisely (one page or less) state the major **scientific** goals to be accomplished (it should not be a statement of methods). The *Background* (5 page maximum recommended) should provide appropriate information that allows the committee members to understand the scientific problem to be examined and appreciate its significance. The approval of this written document by a majority of Doctoral Advisory Committee members is required. Unapproved *Background and Specific Aims* are returned to the student for rewriting. This process will be repeated until the committee approves the proposed research.

#### **Step II. The complete dissertation proposal.**

The approved *Background and Specific Aims* is then expanded into a dissertation proposal that is written in the NIH grant format (10 page maximum, including any figures, but *not* including the references). In addition to the *Background and Specific Aims*, the full proposal should include descriptions of:

- relevant preliminary results (if any) obtained by the student or others (be sure to properly reference the work of others if included)
- the experimental approach that will be taken to achieve the specific aims (including an evaluation of reasonable alternative methods)

- the results that are expected
- how the results will be analyzed or interpreted
- alternative results that could also be (reasonably) obtained and their interpretation
- a bibliography

Although the topic and direction of the proposal should be developed in consultation with the student's mentor, the exercise of writing that proposal is the responsibility of the student. As with the *Background and Specific Aims* section, the finished proposal must be approved by a majority of committee members. Unapproved proposals are returned to the student for rewriting. This process will be repeated until the committee approves the proposal.

### **Step III. The written examination.**

All graduate students are required to take a written examination *prior* to the oral exam. This examination is derived from questions submitted by committee members. These questions examine the ability of the student to perform, evaluate and troubleshoot the research described in his/her written proposal. As with the oral exam described below, the questions can be directly related to the proposed research or can examine the student's breadth of knowledge in related biochemical topics. A student failing this exam can retake it *once* (with different questions) at a time to be set by the committee. Note that the committee members have complete freedom in terms of the style of questions asked (e.g. open book, etc.). A majority of committee members must pass the student.

### **Step IV. The oral examination.**

Once the written exam has been passed, the student is then required to take an oral examination. ***This should not be scheduled until the previous three steps have been completed.*** An oral exam is required by the Graduate School, so the following rules apply to this exam and ***must be followed:***

*"[A] request to schedule the Qualifying Examination should be submitted [to the Graduate School] at least two weeks prior to the date of the examination. Before scheduling the Qualifying Exam, all requirements for the degree should be completed (except the final exam and dissertation.) Students with "I" grades or "S" grades in credit-bearing courses will not be allowed to sit for the Qualifying Examination until letter grades are assigned for these courses."*

The request to schedule the Qualifying Examination is automatically forwarded to the DGS, who will ascertain whether all required coursework has been completed satisfactorily, including participation in the seminar course (BCH618/619), and whether the student has received passes on the written portion of the qualifying examination from a majority of the committee.

*“The Qualifying Examination card will be sent electronically to the DGS prior to the date of the examination. No exam should commence without a card. **All members of the Doctoral Advisory Committee must be present at the oral qualifying examination.** The results of the examination must be reported by the DGS to The Graduate School within 10 days of its conclusion. A majority vote is required to pass this examination. If the result is failure, the advisory committee determines the conditions to be met before another examination may be given. The **minimum** time between examinations is four months. A second examination must be taken within one year after taking the first examination; a third examination is not permitted. If a student fails the qualifying examination on the first attempt, the Advisory Committee may not be changed prior to re-examination without approval of the Dean of the Graduate School. Students are admitted to candidacy for the doctoral degree after they have successfully completed the Qualifying Examination; the date is noted on the transcript.”*

The purpose of this exam is to address, in a more open environment, perceived weaknesses or deficiencies exposed in the written examination. Students will be given ample opportunity to examine the results of their written test and it is anticipated that the basis for questions for this oral exam will, in part, be derived from evaluation of the written exam. Questions generally begin with topics closely related to the proposed research and can subsequently expand to spheres only remotely bordering his/her research area.

***Note: if the Oral Exam is not passed by 6 weeks into the Fall semester this means the mentor will have to pay another semester of tuition.***