

Ph.D. Guide to Graduate Studies
for the
Curriculum in Genetics and Molecular Biology
at the
University of North Carolina at Chapel Hill
and the
University of North Carolina at Chapel Hill
Graduate School Requirements for Graduation
August 2009

Overview of GMB Curriculum Requirements

1. Required Courses:

- a) Core Curriculum consisting of GNET 621 and either 631 or 632, plus two of the following: 631, 632, 622, 624, 641 or an approved elective.
- b) One seminar course where at least one-third of the final grade is based upon class participation (e.g. GNET 625).

2. TA for one semester

For an approved course (GNET 850).

3. Participation in Genetics 703, the student seminar series.

Attendance is required for all students until they pass their oral exam. Presentations are made by 3rd through 5th year students of the program.

4. Participation in Genetics 701/702, the faculty seminar series (Friday Seminar Series).

Attendance is required for all students until they pass their oral exam. Seminar speakers include faculty from other institutions. One speaker per year will be invited and hosted by the students.

5. WRITTEN COMPREHENSIVE EXAMINATION

To be taken after completion of course requirements, usually at the end of the first or second academic year.

6. PRELIMINARY ORAL EXAMINATION

Must be completed by the end of year 3.

7. Presentation of a poster or talk at the Fall Annual Genetics/Curriculum in Genetics

Retreat. Poster required of all 2nd year and above students, unless selected for a talk.

8. Establish a Doctoral Dissertation Committee before the end of year 2.

Committee meetings are scheduled by the student and must be held every 8 months; i.e. 3 times in 2 years.

9. Publish a first author paper before graduation.

10. Dissertation report and final oral exam

Publishable dissertation signed by your preceptor and committee and a public seminar presentation of your research results.

END OF THE FIRST YEAR WHEN YOU JOIN GMB

Written Comprehensive Examination:

This exam is scheduled for mid to late June each year. Students take the exam after year 1 or year 2, depending on when the appropriate coursework has been completed. This decision will be made between the student and the GMB director. Any student who does not pass the exam will be given another opportunity to take the written exam **one year later**. A second failure of the exam will result in academic ineligibility to continue in the Ph.D. program.

The exam is administered by a committee of six faculty selected by the Director. While the Written Exam Committee determines the exact nature of the exam, the basic format will remain the same from year to year. Students will be given specific information (usually assigned research papers) on specific topics (generally two topics) two weeks prior to the exam. Each student is expected to become thoroughly familiar with both of the topics and all the research papers assigned. The exam will be administered on two days. Students are notified of their performance approximately four to six weeks after the exam.

DURING YOUR SECOND YEAR

End of Second Year:

1. Research Topic:

With your preceptor's assistance, select a research topic.

2. Committee:

Choose a Dissertation Committee. Committees consist of at least five faculty members, chaired by the student's preceptor/dissertation advisor. At least three members of the committee must be faculty members of the Curriculum in Genetics and Molecular Biology. Others outside the Curriculum (or the University) are permissible, but they must be full members of the Graduate Faculty or appointed as "Fixed Term Appointees" by the Graduate School. The choice usually involves selection of faculty who share some research interests or technical knowledge, which overlaps your proposed project. The Curriculum Administrator should be notified as soon as a committee is formed. Committee members may be changed during the course of study but this requires approval of the preceptor and the Dissertation Committee. These changes must be sent to the Curriculum Office so they may notify the Graduate School.

Committee Meetings:

Each committee should **meet at least every 8 months** (3 times in 2 years) to monitor the student's progress. The first committee meeting should be scheduled before the end of the second year. "Incomplete" grades will be assigned in GNET 994 for students who fail to schedule meetings. Presentation of a GNET 703 student seminar may count as a committee meeting if at least three members of the student's committee attend the seminar and a brief meeting occurs immediately following the seminar.

Written Comprehensive Exam if not taken in year 1

DURING THE THIRD YEAR

Fall and Spring Semester:

Registration: Dissertation-GNET 994 for 3 hours. (Full time for Graduate students.)

Present a seminar for GNET 703. A new seminar schedule is arranged each year.

Preliminary Oral Examination:

This exam consists of a **written dissertation proposal** and an **oral examination** based on the proposal.

The written proposal should have a format similar to a grant proposal, such as those submitted to NIH, NSF, American Heart Association, or similar research funding agencies. The proposal should be ~15 typed, single-spaced pages with margins and print size as specified by the NIH. The proposal should include an introduction, specific aims, background, significance or rationale, preliminary data, and research design and methods, with the appropriate references. This proposal should be provided to the committee members at least one week prior to the oral exam.

For the oral examination students should prepare a formal presentation of approximately 30 minutes. During this presentation, the student should expect to be interrupted with questions, yet retain the flow of the presentation. It is not appropriate for the dissertation advisor to answer questions for the student! The committee's questions should focus on the dissertation work, in particular to determine whether the proposed work is feasible, and whether the student has an adequate grasp of the literature and the skills to accomplish the work in a timely fashion. General, scientific questions that do not directly pertain to the dissertation are also permitted.

DURING THE FOURTH/FIFTH YEAR

Fall and Spring Semester:

Registration: Dissertation-GNET 994 for 3 hours. (Full time for Graduate students.)

Present a seminar for GNET 703. A new seminar schedule is arranged each year.

Work hard, tabulate results, publish papers, write dissertation (largely a collection of published and unpublished manuscripts which are unified with, a comprehensive introductory and concluding chapters). The decision of when to write the dissertation is a collective one made by you, your preceptor, and your committee. Contact the Curriculum Office to apply for candidacy early in the semester in which you actually plan to graduate.

Publication Requirement:

In order to graduate, all Curriculum in Genetics and Molecular Biology PhD candidates must publish at least one first authored, peer-reviewed research manuscript. This paper must be *in press* (i.e. accepted for publication) prior to establishing a thesis defense date, and thus prior to defending the thesis. In rare extenuating circumstances, exceptions to this policy can be granted. Exceptions require successful written petition to the Director of the Curriculum. The written petition must explain the reason(s) a waiver is being requested, and must be signed by all members of the student's thesis committee. The Director will present the petition to the Advisory Committee, which will decide the outcome by majority vote.

Final Oral Examination:

This exam should be scheduled at a time that does not conflict with regularly scheduled Curriculum activities. It is anticipated that many of the Curriculum's faculty and students will attend the public portion of this exam. The public portion will be a formal presentation of the student's dissertation work, including a substantive introduction, a sophisticated presentation of the experiments and results, and a conclusion that demonstrates the significance of the work to the field. It is expected that the public seminar will last for 45-50 minutes. The committee's examination of the dissertation candidate will follow the public seminar. The format of this exam is at the committee's discretion.