Queens College Biology Final Examination/Thesis Requirements for the MA Degree

Depending on personal interests and career goals, candidates for the MA degree in Biology may choose one of two tracks to fulfill the degree requirements --- the research-intensive track (30 credits required) and the course-intensive track (32 credits required). The two tracks have different final examination requirements, which are described as follows. All final examinations need to be held on or before the last day of class of the semester in which the student plans to graduate. Any revisions or additional requirements stemming from the exam must be fulfilled prior to the Registrar’s deadline, to permit graduation that semester (talk to D. Weinstein for specific deadline dates).

Final Examination Requirements of the Research-Intensive Track: The Master’s Thesis

Students in the Master’s Program who intend to perform research and complete a thesis must have a faculty sponsor who is willing to provide the laboratory space, equipment, and other resources for the completion of the research project, to serve as supervisor, and to provide guidance for all laboratory or field work, to serve as advisor for the writing and defense of the thesis, and to serve as chairperson for the thesis committee, which will also consist of two additional faculty members. Students who select this option must register for 1 credit of Tutorial (BIOL 792) with their faculty sponsor, in the semester that they wish to complete this requirement.

While there is no minimum page requirement for the Master’s Thesis, candidates are expected to present significant independent research that could be published as a scientific journal article. A fully referenced Introduction should place the study in a broader scientific context; the implications of this work should also be considered in a separate Discussion section. Candidates should also give an oral synopsis of their research, and be prepared to defend their work to the members of the thesis committee. Master’s defenses are advertised in the Department, and the public invited to attend. The student can pass, pass with revision, or fail the thesis defense. Revisions should be completed within a reasonable time frame, to be agreed upon by the thesis committee members. Students who fail the defense will not be permitted to reschedule a second defense.

Upon successful completion of the defense, two copies of the “thesis approval” form (available from the Graduate Advisor) should be submitted to the Graduate Advisor, who will sign and forward it to the Dean of Graduate Studies and the Registrar. Submission of this signed form, together with successful completion (a grade of “A” or “B”) of Tutorial (BIOL 792), will indicate to the Registrar that the final requirements for the MA degree have been fulfilled. In addition, at least one copy of the final version of the thesis, with signed first page, should be submitted to the library for binding; additional copies, for the student, the advisor, and the Biology Department, are also recommended.

The Format of the Master's Thesis

The thesis must be type written, in font size 12, and double-spaced.

In accordance with Graduate Division and College Library stipulations, the left margin must be 1.5 inches deep. It is recommended that the top, right and bottom margins be at least 1.0 inch deep.

The thesis should be organized in major sections in the following order: Title Page (see below for sample Title Page), Abstract, Introduction, Materials and Methods, Results, Discussion, References, Appendices.
With the exception of the Title Page, all pages must be numbered consecutively at the bottom center of each page. The Abstract page should be page number 1.

If the thesis is copyrighted, a Copyright Statement Page should appear immediately after the Title Page. This page should not have a page number.

If the thesis is relatively long and contains several subsections (e.g. the Results section is divided into multiple chapters), a Table of Content should be included. This should be page number i.

Where desirable and appropriate, an Acknowledgement section may be included. In such case, the Acknowledgement page(s) should follow the title or copyright page and appear as page i. If a Table of Content is included, the Acknowledgement page should follow the Table of Content and be numbered as page ii.

All figures should include comprehensive legends. Tables and figures may be embedded in the text (preferable) or included after the references.

All cited references should be listed in alphabetical order in the Reference section in a format that includes full publication title and all author names.

**Final Examination Requirements of the Course-Intensive Track**

Candidates who choose to complete their degree requirements through course work must either write a literature-based review and defend this work in an oral examination, or pass a written comprehensive examination. If the performance on the examination is deemed unacceptable, a candidate may reschedule once, in either format, irrespective of which format they first attempted.

**The Literature-Based Review Paper/Oral Defense**

This option is designed to ensure that candidates have mastered in-depth knowledge in an area of their interests. Students are expected to write a literature-based review paper, of no less than 10 single-spaced pages; this work should be comprehensive, yet sufficiently concise to be considered for publication in an appropriate scientific journal, and should be formatted accordingly. Any topic in Biology is in principle acceptable for review, but the subject matter should be of high current interest in whatever area the student has chosen to pursue.

Students should select a mentor from the Biology Department faculty; the mentor will help the student choose a topic for review and guide the student in preparation of the paper. The mentor will also assist in the selection of two additional members of the student’s “final examination committee”; the mentor is to be considered the chair of this committee. **Students who select this option must register for 1 credit of Tutorial (BIOL 792) with their selected mentor, in the semester that they wish to complete this requirement.** Potential mentors must be consulted prior to course registration. Under circumstances in which needed expertise on a particular subjects warrants, a faculty member from outside of the Department may be invited to be a committee member. It is important to start the process of assembling an examination committee early. This will allow the candidates to discuss plans for the examination topic with at least the chair, and ideally all, of the committee well before the oral defense date. **A successful defense will be noted by successful completion of Tutorial (BIOL 792); a grade of “A” or “B” will indicate to the Registrar that the final requirements for the MA degree have been fulfilled; the “final examination requirement” form that some of you may remember is no longer required.**
The written review must be submitted to all members of the committee at least one week in advance of the defense date. Committee members may demand rescheduling of the defense if the written document is not submitted on time. At the oral defense, the student should present his/her literature-based review, in a seminar format, to the examination committee; a presentation of roughly forty-five minutes in length would be considered appropriate. Following the presentation, the committee may ask further questions related to the topic, the oral presentation, or the written review. Candidates are expected to have done sufficient reading in the field to be able to address fundamental questions on the topic. Based on the written work and oral presentation and defense, the student can pass, pass with revision, or fail the thesis defense; revisions should be completed within a reasonable time frame, to be agreed upon by the thesis committee members.

**The Written Examination**
Candidates can alternatively select a written exam to demonstrate mastery of a body of general knowledge. After completion of a minimum of 24 credits, students may take the “first-level” comprehensive exam given to the CUNY Graduate Students in the appropriate Biological Sciences sub-program, administered each June at the Graduate Center. Students choosing this option must inform the Graduate Advisor at the beginning of the Spring Semester.
EXPERIMENTS IN PLANT HYBRIDIZATION: BEING AN INVESTIGATION OF THE MECHANISMS OF INHERITANCE OF THE GARDEN PEA (PISUM SATIVUM)

by

Gregor Mendel

Submitted in partial fulfillment of the requirements for the degree of Master of Art in Biology in the Graduate Division of Queens College of The City University of New York

April 1866

Approved by: _________________________
(Sponsor)

Date: ______________________________