Biology 537 - Thesis CONTENT

1. SCOPE OF AN HONOURS THESIS

Research for the thesis should be directed toward answering a question, applying fresh methods to a biological problem, or testing a hypothesis. In some cases the research that you do may lead to new data and concepts eventually resulting in a publication. However, because of the time limitations, and problems with developing methods etc., the amount of data you collect may be limited and less than you anticipated. Although your goal should be to have some significant results to discuss, a satisfactory thesis can be based on an unsuccessful attempt at solving a problem if there is an effective discussion of the problem and a suggestion of how the problem could be solved. Sometimes it may be better to abandon experiments that are not producing data and to concentrate on writing a thesis. Regular consultation with your supervisor and the course coordinator will help to keep your research project focused and manageable within the available time.

2. RESPONSIBILITIES OF THE SUPERVISOR AND COMMITTEE

Supervisor

a) Honours thesis students should be involved in most phases of the research process, from formulation of hypotheses to be tested through experimental design, data collection and the communication of results. Although students will most often work on a project of interest to the supervisor, students should not be simply handed a project with all of the details worked out. It is extremely important that Honours Thesis students be involved in some of the early stages of project design.

b) Fourth year students should not normally be expected to have the experience to formulate a hypothesis and develop a research program on their own. Experience has shown that most students have great difficulty in planning a realistic research schedule. Supervisors should help project development and should meet with their students regularly to ensure that the schedule is still realistic. A research proposal (3 pages) is due mid-October to ensure each student has developed a hypothesis and research plan.

c) Because they are usually completed within 6-8 months, Honours Thesis projects are not the equivalent of M.Sc. research projects. They should therefore be limited in scope and well-defined so that they can be completed within the allotted time.

d) Supervisors should ensure that the thesis is of reasonable quality with respect to style, organization etc. before submission. Since most students will need help with scientific writing, supervisors should review drafts of the thesis at least a week before each of the deadlines.

Supervisors (or co-supervisors) will comment on a first draft of the thesis submitted in March. Supervisors (or co-supervisors) and committee members will grade the final copy submitted at
the end of the winter term.

3) When a student is co-supervised by a faculty member from outside the biology department, the other thesis co-supervisor must be a faculty member in the Department of Biology.

Advisory Committee

a) Each Honours Thesis student will have an "advisory committee" consisting of a supervisor (or co-supervisors) and one other faculty member from the Biology Department preferably with some interest in the subject of the thesis. In some cases, the supervisor may come from outside the department. Students with supervisors outside the department must have a Biology faculty member as a co-supervisor. This person is not a collaborator but is required to ensure that all requirements are met at the Biology thesis course standard.

Advisory committee members should be available for consultation throughout the project. They should also attend the student's seminar, poster day and the thesis defense and will be asked to grade the final thesis draft.

Examination Committee

a) Normally the examination committee will consist of the advisory committee and one of the course co-ordinators. The co-ordinator will also serve as chairperson of this committee.

b) The examination committee will grade both the thesis and student's performance in the thesis defense.

3. THESIS

For most people the production of an acceptable thesis is the most difficult aspect of this course - it should not be taken lightly. You will probably find that writing takes much longer than you expect and that your supervisor is more critical than you could possibly imagine. Leave yourself lots of time between completion of a first draft and the deadline. Do not be surprised if you have to write three or more drafts before the thesis is acceptable.

To provide you with some useful feedback and to help keep you on schedule, we ask you to submit the first draft of your thesis in March. Your supervisor will read this draft of the thesis and will comment on the style, organization and content. It is worthwhile to make your own arrangements to have your committee member read the draft as well. The final thesis is due at the end of the winter term and will be graded by your supervisor and committee members.

The section of this homepage called thesis format should be referred to when writing your thesis.

4. SEMINAR
During the year you will present a seminar on your research project to class members and your advisory committee. Even though you may not have completed your project by the time you give your seminar you should be able to outline the hypothesis being tested, the methods used and the results to date or the expected results. Seminars will be 10 minutes long with 5 minutes for questions and should be as professional as possible. Some guidelines on presenting seminars will be distributed by the co-ordinator. Your committee members will give you some feedback to help you improve your style of presentation. All presentations should be in PowerPoint, you must have the presentation ready to go at your designated time, i.e., you must arrange to have your keynote presentation to be uploaded to the course OnQ site by 4:00pm the day before your Friday afternoon presentation. The co-ordinator will ensure that presentations work if they are submitted on time.

5. POSTER SESSION

In mid-March, there will be a poster session involving all Biology 537 students. Each student will present a poster showing the important features of her/his research project. The poster will be displayed in the atrium of the Biosciences complex from Monday to Friday afternoon. Each student will be stationed near their poster on Friday to answer questions from interested faculty, post-docs, graduate students and undergraduates.

6. THESIS DEFENSE

The thesis defense will take place after the complete thesis has been read in April. You will be expected to present a brief seminar (4 min. maximum) on your research followed by 20 minutes of questions on the thesis from your examination committee. Each exam will last a total of 30 minutes. You will have to demonstrate that you know and understand the relevant literature, that you can defend the conclusions you have reached and that you understand and appreciate the methods you have used and the limitations of those methods.

537 Coordinator, the supervisor or co-supervisor, and committee member are each given a copy!

9. EVALUATION

a) Written material: Each member of your examining committee will receive the final copy of the thesis along with an evaluation form. The thesis will be evaluated with respect to the writing style, analysis, interpretation of results and overall organization. Each committee member will assign a grade and make comments on the aspects of the thesis. A final grade will be determined by the coordinators of Biol 537 based on performance and input from your advisory committee.
10. PENALTIES FOR LATE SUBMISSION

There will be a penalty of 2% per day for late submission. Be on time, you will lose 2% even if your thesis is only a few minutes late and these late penalties are deducted from your final grade out of 100. Late theses also put an unnecessary burden on your examiners who have only a short time to evaluate your thesis. Do not underestimate the time required for writing a thesis. It will take you much longer than you suspect and will probably need 2 to 3 revisions after the first draft before it is ready for submission. Your supervisor should see your first draft and indicate changes that are required. A supervisor's duty is to help you write an acceptable thesis.