

Graduate Studies in Biology

First Year

Rotations

Rotation 1: September 7th - October 22nd

Rotation 2: October 25th - December 17th

Rotation 3: January 10th - March 4th

Rotation talks are on October 22nd, December 17th, and March 4th at 3PM H310

Year One Review (First two weeks of May)

Faculty meets to review the progress of each Year one Student
Students are notified immediately of deficiencies.

Second Year

The Comprehensive Examination

Dates to keep in mind

- March 1 Committee members finalized and forwarded to the GPD
- March 1 Three proposed topics forwarded to the committee
- March 14 Committee returns approved topic to the student
- April 14 Or two weeks before the exam forward the written proposal to the examination committee
- May 1 All exams completed
- December Examination retakes, all exams completed by December 31st

Content

The body of the proposal should be 12-15 pages, use 1.5 line spacing and a font that gives no more than 15 characters per inch (Arial is readable).

The 10-12 page body of the proposal should follow the format:

Face page (1 page) includes:

- Title
- Brief summary

Specific aims/hypothesis to be tested

Background (2-3 pages)

Briefly describe previous studies that led to formation of the hypothesis. Specify how your proposed work will contribute to the field. Literature citations should be included at the appropriate locations within the text.

Experimental approach (7-8 pages)

This section should include the design of the proposed experimental approach, together with expected outcomes and alternative approaches. Figures and tables should not be included in this section of the proposal, but appended.

Additional information outside the 12 page limit:

Figures and Tables

References

Complete citations are required, including the titles of the articles.

Exam format

These are suggestions:

Students will begin the examination with a 15-20 minute presentation of a summary of the research proposal. Avoid tedious Power Point presentations; the idea is to make the summary brief. Expect questions and be prepared not to finish certain sections — that is why we ask you to make the summary brief.

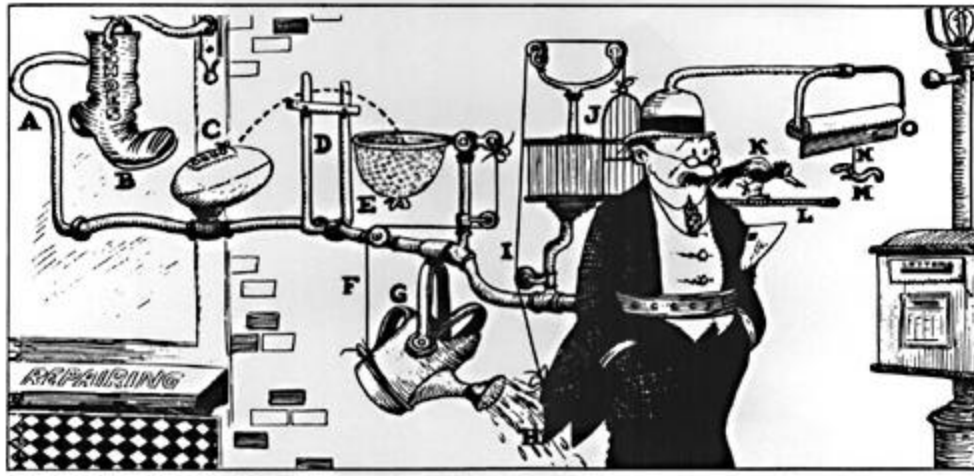
The summary should briefly touch on:

- 1) the background to the proposed work,
- 2) the aims and hypotheses to be pursued
- 3) proposed experimental approach
- 4) perhaps some expected result
- 5) anticipated problems

The oral examination, including questioning and discussion during and following presentation of the summary, will usually occur over 1.5-2 hours.

Students

General Writing and Oral Presentation Resources



Keep You From Forgetting To Mail Your Wife's Letter RUBE GOLDBERG (tm) RGI 049

Omit needless words. Vigorous writing is concise. A sentence should contain no unnecessary words, a paragraph no unnecessary sentences, for the same reason that a drawing should have no unnecessary lines and a machine no unnecessary parts. This requires not that the writer make all his sentences short, or that he avoid all detail and treat his subjects only in outline, but that every word tell...

Avoid fancy words. Avoid the elaborate, the pretentious, the coy, and the cute. Do not be tempted by a twenty-dollar word when there is a ten-center handy, ready, and able...All [words] are good, but some are better than others.

Elements of Style, Strunk and White.

These are some PowerPoint presentations taken from Dr. Marilee Ogren at MIT. She teaches writing and oral presentation skills to MIT Biology students.

[Effective Writing](#)
[Oral Presentations](#)

Graduate Regulations

Biology Department

Regulations for Graduate Programs

2004 Revision

1. Graduate Programs

The Biology Department of Boston College offers courses leading to the degrees of Doctor of Philosophy and Master of Science, and cooperates with the Graduate School of Education in the Master of Science in Teaching (M.S.T.) program.

Students seeking admission to the graduate program should have a strong background in biology, chemistry and mathematics with grades of B or better in these subjects. Deficiencies in preparation as noted by the Graduate Admissions Committee shall be made up in the graduate school. First year students are required to participate in two (M.S.) or three (Ph.D.) laboratory rotations, which involve an 8 -10 week period of research and study in the department's graduate research laboratories as chosen by the student. M.S. and Ph.D. students are also normally required to participate in the teaching of undergraduate courses for at least two semesters during their courses of study.

1.1. Ph.D. Program Overview

The Ph.D. program does not require a specific number of graduate credits; however, the Residence Requirements, as defined by the Graduate School of Arts and Sciences must be met. The minimum curriculum for Ph.D. students consists of four graduate core courses (600+ level), the responsible conduct of research/professional development course, and five additional graduate elective courses (500+ level), at least three of which are graduate seminar (800+ level) courses. The Ph.D. degree in Biology also requires the satisfactory completion of a candidacy examination and a presentation and public oral defense of a thesis based on original research conducted under the guidance of a full-time, tenure-track, departmental faculty member.

1.2. Master of Science Program Overview

A minimum of 30 graduate credits is required for the Master's degree. For the M.S. in Biology, this normally includes the four graduate core courses (600+ level), the responsible conduct of research/professional development course, and three graduate elective (500+ level) courses, at least one of which is a graduate seminar (800+ level) course. The M.S. degree in Biology requires the presentation and oral defense of a

thesis based on original research conducted within the department under the guidance of a full-time faculty, tenure-track, departmental member.

1.3. Combined Bachelor of Science/Master of Science Program Overview

A minimum of 20 graduate credits is required for the dual B.S./M.S. degree in Biology, and this normally includes Graduate Core (8 credits), upon their entry into the Program at the beginning of their Senior year, plus three Graduate Seminars/Elective Courses (at least one of which must be a graduate seminar) (6 credits), plus the RCR/PD Seminar (2 credits). As these students would normally be expected to stay in the same lab as their undergraduate research lab to complete their M.S. thesis research, research rotations would not be required (see 5.2 below). Successful completion of the M.S. degree requires the presentation and oral defense of a thesis based on original research conducted within the Department under the guidance of a full-time faculty, tenure-track mentor of the Biology Department.

2. Academic Procedures and Regulations

All graduate students are responsible for meeting the comprehensive degree requirements contained in the Graduate School of Arts and Sciences Bulletin and as stated herein. Any questions concerning these regulations should be addressed to the Graduate Program Director or the Department Chairperson.

2.1. Graduate Admissions Committee

A Graduate Admissions Committee shall be established by the Department Chairperson for the purpose of recruiting, evaluating and admitting new students into the Biology Department Ph.D. and M.S. Programs. The duties of this committee shall also include:

- Review of each entering student's academic record and background, and professional goals.
- Determination if the student has any specific background deficiencies, which must be corrected as a condition of acceptance.
- Recommending selected entering students for special fellowships and awards.

2.2. Graduate Advisement Committee

A Graduate Advisement Committee shall be established by the Graduate Program Director for the purpose of providing academic and professional advisement for all entering graduate students. This committee shall have the responsibility of advising these students and shall have the power of approval of their course selections, consistent with departmental practices for at least the first semester after entry into the program until an approved research advisor is chosen. The committee shall not have the responsibility or power to approve the student's choice of mentor.

2.3. Responsibilities of the Graduate Student

- Students are encouraged to meet with their research advisor or a member of the Graduate Advisement Committee before each registration with a list of courses, prepared beforehand, for which the student wishes to register that semester.
- Students must successfully complete those courses that the Graduate Admissions Committee required the student to take to correct deficiencies in their record.
- Students must regularly attend the Departmental Colloquia, normally held on Tuesdays at 3 p.m.
- Under normal circumstances the student should have completed meetings with prospective mentors and found a mentor by the end of the first year. Students should select a thesis advisory committee consisting of the research mentor and two or more additional faculty members by September 1 of their second year. The student must send the name of the mentor and the other advisory committee members to the Graduate Program Director.
- If the student has not found a mentor by the end of the first year as a full-time student in the graduate program, the student must submit a written statement to the Graduate Program Director describing the specific plans that the student has for selecting a mentor. The Graduate Program Director may meet with the student to discuss these plans.

2.4. Requirements for Teaching Assistantships

All students who wish to be considered for Teaching Assistantships after the first year in the graduate program must fulfill the responsibilities listed in section 2.3 and also submit evidence of satisfactory research progress and teaching performance to the Graduate Program Director. Students in the M.S. program may satisfy this requirement via the Teaching Assistant Evaluation Form(s) submitted by faculty and the Research Progress Form.

All Ph.D. students who wish to be considered for Teaching Assistantships beyond the second year in the graduate program must have the support of their research advisor and/or dissertation committee.

2.5. Grade Requirements for Good Standing

Departmental regulations require that graduate students maintain an average of B (3.0) in their lecture, laboratory, and seminar courses (that is, exclusive of research and thesis courses like BI799 and BI801) each semester.

A student whose average for a semester in lecture, laboratory and seminar courses falls below a B will be considered to be on probation and must bring his/her semester average to B in such courses by the end of the following semester to be considered in good standing in the program. A student who fails to do so will be considered to have lost good standing in the program, and that student may lose eligibility for departmental support, including teaching assistantships and tuition remission.

In addition, a student who receives an F in a lecture, laboratory, or seminar course is considered on probation and must repeat the course or an equivalent approved by the Graduate Program Director, with a passing grade at the next opportunity in order to have the opportunity to return to good standing in the graduate program.

A student who receives grades of C or lower in more than eight semester hours of course work may be required to withdraw from the Biology Graduate Program.

The records of students not in good standing will be evaluated each semester by the Graduate Program Director in consultation with the mentor to determine how the deficiency may be corrected, whether the student will continue to receive departmental financial support, and whether to recommend continuation or termination in the program.

2.6. Progress Toward Degree

Progress of each first year graduate student will be assessed at a meeting of the tenure-track faculty, based on course and rotation grades and qualitative evaluations of rotations, during May of her/his first year in the program. Demonstration of appropriate progress will be required for students to continue into the second year of the graduate program.

The Thesis Advisory Committee is assembled by each student in consultation with her/his mentor, usually within one to three months after each student identifies a thesis mentor. The committee is comprised of the Biology faculty mentor (as chairperson) and two or more members of the Biology Graduate Faculty. Additional members with appropriate expertise may be added from outside the department. Normally, the thesis mentor will propose the names of the members of the Committee to the Graduate Program Director for his/her approval. The Thesis Advisory Committee will serve as a mentoring group for each student throughout his/her graduate career. This committee is expected to meet with each student periodically, as described below, or more frequently if deemed desirable by the committee or the student.

Thesis Advisory Committee meetings constitute opportunities for faculty members to constructively evaluate each student's progress toward the Ph.D. or M.S. degree. In this role, the Committee members serve as valuable resources to assist each student in planning and evaluating the experiments in his or her dissertation. Members of the Thesis Advisory Committee will generally be most knowledgeable concerning each student's abilities and strengths, and are often called upon to provide letters of recommendation for subsequent stages of the student's career.

Thesis Advisory Committees will first meet with M.S. students no later than the end of September of each student's second year, and again no later than the end of May of each student's second year.

Thesis Advisory Committees will first meet with Ph.D. students no later than December of each student's second year in the program, and at least annually thereafter. In advance of this first meeting, each student will prepare a written thesis research prospectus, describing her/his intended thesis research project. This prospectus will be distributed to the committee members at least one week before the meeting. Discussion

and refinement of this prospectus will be the primary topic of the initial committee meeting.

Students will provide a written summary of research proposed and/or research accomplishments to committee members in advance of each M.S. or Ph.D. Thesis Advisory Committee meeting, until s/he defends the completed dissertation or terminates enrollment in the program.

On the basis of the written summary and the meeting with the student, the Thesis Advisory Committee will vote on whether the student has made satisfactory or unsatisfactory progress in the preceding interval. In order to be considered in good standing in the Ph.D. program a student must receive a satisfactory evaluation from his/her Dissertation Committee at least once during each academic year.

Mentors will provide a written summary, to be filed with the Graduate Program Director and the Biology Administrative Director, and copied to the student, of the outcome of each Thesis Advisory Committee meeting completed by the student.

In the event that the student's research activity or defense of that activity appears unsatisfactory, the Thesis Advisory Committee has the option of requiring the student to attempt to correct the deficiency and meet again with the committee in a time frame established by the committee. If, after this meeting, the committee determines that the student has failed to bring his/her performance to a satisfactory level, the student will no longer be in good standing.

2.8. Departmental Time Limitations for Degree Completion

All Ph.D. students are allowed seven years after matriculation into the program (rather than after advancement to candidacy) to complete the requirements for the degree. After seven years, the Graduate Program Committee will review the student's progress and recommend to the Department Chairperson whether or not a one year extension should be approved. Students remaining in the program after this point (seven or eight years, depending on whether or not an extension has been granted) will no longer be eligible for departmental support (Teaching Assistantships and tuition remission).

All M.S. students are allowed three years after matriculation into the program to complete the requirements for the degree. After three years, the Graduate Program Committee will review the student's progress and recommend to the Department Chairperson whether or not a one semester extension should be approved. Students remaining in the program after this point (3 or 3-1/2 years depending on whether or not an extension has been granted) will no longer be eligible for departmental support (Teaching Assistantships and tuition remission).

3. Ph.D. Program

3.1. Ph.D. Course Requirements & Typical Program Schedule

The minimum curriculum for Ph.D. students consists of four Graduate Core Courses (BI611 Advanced Genetics, BI612 Graduate Biochemistry, BI614 Graduate Molecular Biology, and BI615 Advanced Cell Biology); five additional Biology-approved Graduate

Elective Courses (e.g., BI500+, BI800+), at least three of which must be Graduate Seminars (e.g., BI800+); and a seminar on Responsible Conduct of Research and Professional Development, BI880).

Example of a Typical Program for Ph.D. Students

Attendance at Departmental Colloquia is expected of all full-time students throughout their program participation.

Semester One

Grad Core Biology (Genetics) BI611	2 credits
Grad Core Biology (Biochemistry) BI612	2 credits
Biology-approved Graduate Elective or Seminar	2 or 3 cr.
Lab Rotation 1	
Lab Rotation 2 (~first half)	
Teaching Assistantship	

Semester Two:

Grad Core Biology (Molecular Biology) BI614	2 credits
Grad Core Biology (Cell Biology) BI615	2 credits
Biology-approved Graduate Elective or Seminar	2 or 3 cr.
Lab Rotation 2 (~second half)	
Lab Rotation 3	
Teaching Assistantship	

Semester Three:

Thesis Research	
Biology-approved Graduate Seminar	2 credits
Teaching Assistantship	

Semester Four:

Biology-approved Graduate Seminar 2 credits

Responsible Conduct/Professional Develop. Sem. 2 credits

Thesis Research

Ph.D. Candidacy Exam

Teaching Assistantship

Semester Five:

Thesis Research

Biology-approved Graduate Seminar 2 credits

Semester Six and afterward:

Thesis Research

Remaining Biology-approved Graduate Seminars

Optional additional courses

Completion of Ph.D. Dissertation

Public Presentation of Ph.D. Thesis

Defense of Ph.D. Thesis

3.2. Overview of Multiple Ph.D. Committees

There are several committees that shepherd a Ph.D. student through the Biology Graduate Program. While the committees have different names to reflect their different functions, there is usually a substantial continuum of faculty membership. The committees are described below, in detail. For clarity, they are briefly summarized here in their order of appearance in each student's training.

Ph.D. Candidacy Examination Committee

Three faculty, approved by the Graduate Program Director, who administers the candidacy examination. The student's mentor may attend with non-voting status.

Thesis Advisory Committee*

Three or more faculty members who advise each student in the conduct of her/his thesis research.

Ph.D. Defense Committee

Five faculty before whom the Ph.D. candidate must defend her/his thesis in public and private sessions

*For continuity, the members of the Thesis Advisory Committee typically continue as members of each student's Ph.D. Defense Committee; however, substitutions are allowed.

3.3. Ph.D. Candidacy

To advance to candidacy for the doctoral degree, the student must pass a Ph.D. Candidacy Examination otherwise known as the Comprehensive Examination (described in Section 3.3.1.). A student who has passed the Ph.D. Candidacy Examination, but still must complete one or more seminar courses becomes a doctoral candidate only after completing the seminar course(s). Only students who have been admitted to candidacy are allowed to register for BI999, Doctoral Continuation.

3.3.1. Ph.D. Candidacy Examination (Comprehensive Examination)

The examination for admission to candidacy for the Ph.D. will take place during May of the second year. Passing the exam on that occasion, or on the basis of a "re-take" examination held no later than end of December of the third year, will be required for continuation in the Ph.D. program.

This examination will be based on a written research proposal (5-10 pages in length) prepared by the candidate on a topic unrelated, or related but not identical, to the intended thesis research project of the candidate. The student's mentor should be consulted as to the suitability of the three topics. The candidate will defend the proposal in an oral examination, administered by a faculty committee. Successful defense of the proposal will be required for the student to be admitted to candidacy for the Ph.D.

Potential topics for the written proposal will be submitted by each second-year Ph.D. student to a faculty committee, during the first week of March. The committee will inform each student of the topic of her/his proposal, based on the list submitted by the student, by March 14. Written proposals will be provided to the candidacy examination committee by April 14th or no later than one week before the date of the oral examination, and oral examinations will be completed no later than May 1.

On the basis of the written proposal presentation, the candidate's understanding of the proposed project and relevant background information, the Examination Committee will vote on whether the student is qualified to advance to Ph.D. candidacy. If a student passes the examination and has completed all other requirements for the Ph.D. degree, with the exception of the thesis and its defense, the student will be considered to have formally advanced to candidacy for the degree. If the student does not pass, he or she must re-defend the initial proposal or prepare, submit, and defend a new proposal, as the Examination Committee deems appropriate.

If a student does not pass the Ph.D. Candidacy Examination within the limits outlined above, she/he will be terminated in the Ph.D. program. The Examination Committee may, in such circumstances, recommend that the student be offered a transfer into the

M.S. Program, with sufficient and stated time limits to allow the student to reasonably complete the requirements for that degree.

3.3.2. Schedule and Time Limitations

A student entering the program with only a B.S. degree is required to pass the Ph.D. Candidacy Examination within five consecutive semesters of entering the program.

For the purposes of this time limitation:

- Students who transfer into the Ph.D. Program within the first year of work in our M.S. Program will be considered to have started the Ph.D. Program at the start of their M.S. graduate work.
- Students entering the Ph.D. Program who already have a M.S. degree in the biological sciences from Boston College will be required to pass the Ph.D. Candidacy Examination within three consecutive semesters after entering the Ph.D. Program.
- Students entering the Ph.D. program who already have a M.S. degree in the biological sciences from another university will, in general, be required to pass the Ph.D. Candidacy Examination within three consecutive semesters after entering the Ph.D. Program. Exceptions to this norm can be arranged at the discretion of the Graduate Program Director.
- Students whose native language is not English, and who need remedial study in English, may be granted a one or two semester extension for completion of the Ph.D. Candidacy Examination. Such extensions may be approved by the Department Chairperson, acting in consultation with the Graduate Program Director and the student's research mentor.

3.4. Ph.D. Thesis and Defense

In addition to the original members of Thesis Advisory Committee, who serve as formal thesis readers, at least two other faculty are added as additional examiners to form the Ph.D. Defense Committee. A maximum of two persons from outside the Biology Department may serve on this committee. All members must hold a faculty appointment and a Ph.D. or equivalent degree.

The dissertation shall be defended by the candidate in the public oral examination. A copy of the dissertation shall be distributed to each of the examiners at least 14 days prior to the defense.

To receive the Ph.D. degree, official approval of the written dissertation by the members of the Ph.D. Defense Committee is required, in addition to a vote of pass on the public presentation and defense. Committee members certify their acceptance of the written thesis by signing the title page of the dissertation and their vote on the defense by completing the appropriate forms. The student must file two signed copies of the approved dissertation in the Registrar's Office, following the guidelines established by the Graduate School of Arts and Sciences.

3.5. Voting Rule for Thesis Advisory, Ph.D. Candidacy, and Ph.D. Defense Committees

Voting options, when voting is required, are pass or fail. Committees should strive in each case to reach a unanimous decision. However, if this is not possible, the rule shall be that if more than one member of any of the above committees votes fail, then the student will be considered to have failed to complete the requirement being addressed by the committee.

4. Master of Science Program

4.1. M.S. Course Requirements & Typical Program Schedule

A minimum of 30 graduate credits is required for the Master of Science degree. For the M.S. in Biology, this must include the four Graduate Core courses (BI611 Advanced Genetics, BI612 Graduate Biochemistry, BI614 Graduate Molecular Biology, and BI615 Advanced Cell Biology); three additional Biology-approved Graduate Elective Courses (e.g., BI500+, BI800+), at least one of which must be a Biology-approved Graduate Seminar Course (e.g., BI800+); and a seminar course on Responsible Conduct of Research and Professional Development, BI880).

Example of a Typical Program for M.S. Students

Attendance at Departmental Colloquia is expected of all full-time students throughout their program participation.

Semester One:

Grad Core Biology BI611	2 credits
Grad Biochemistry BI612	2 credits
Biology-approved Graduate Elective or Seminar*	2 or 3 cr.
Lab Rotation 1	
Lab Rotation 2 (~first half)	
Teaching Assistantship	

Semester Two:

Grad Core Biology BI614	2 credits
Grad Core Biology BI615	2 credits
Biology-approved Graduate Elective or Seminar*	2 or 3 cr.
Lab Rotation 2 (second half)	
Teaching Assistantship	

Semester Three

Biology-approved Graduate Seminar*	2 credits
Departmental Seminar BI805	1 credit
Readings & Research BI799	3 credits
Thesis Seminar BI801	3 credits
Teaching Assistantship	

Semester Four:

Biology-approved Graduate Elective*	3 credits
Readings & Research BI799	3 credits
Thesis Seminar BI801	3 credits
Responsible Conduct/Professional Develop. Sem.	2 credits
Teaching Assistantship	

Semester Five (if needed):

Interim Study BI888	
Optional Graduate Electives/Seminars	2 or 3 cr.

*Only three of these four courses, including at least one seminar course, are required for fulfillment of the requirements for the M.S. degree.

4.2. M.S. Thesis and Defense

A research thesis is required for completion of the M.S. degree. While there are no specific format requirements, the requirements of the Graduate School of Arts and Sciences must be followed.

The completed M.S. thesis will be submitted to the student's major advisor for preliminary approval. Once approved, the thesis will be given to the all members of the Thesis Advisory Committee, which will also serve as will serve as the M.S. Thesis Defense Committee. The Chairperson of this committee will normally be the major advisor. The thesis will be given to all committee members no later than 14 days prior to a meeting at which the student will present, and be examined regarding, the thesis.

The thesis examination will consist of questions related to the thesis, but should also test the student's breadth and comprehension of knowledge in the area of biology in which the thesis work was completed. Once the examination is completed, the chairperson of

the committee will communicate the results on the appropriate forms to the Department Chairperson and the Dean of the Graduate School. As stated in the Graduate School of Arts and Sciences regulations, a candidate who fails the thesis examination may take it only one more time.

5. B.S./M.S. (Five-Year Combined) Degree Program in Biology (“5YBS/MS”)

5.1. Rationale.

This program allows Boston College students involved in undergraduate research to apply to the Biology Department Graduate Program during their Junior year, for entry into the 5YBS/MS before the beginning of their Senior year. The two degrees will be conferred as requirements are completed (see 5.5 below). The program will result in a terminal M.S. Degree with no avenue to switch to the Ph.D. Program and no commitment to Ph.D. Program admission for the student (in fact, 5YBS/MS students will be strongly discouraged from continuing past the M.S. at Boston College).

5.2. Plan of Research & Timing within Program

Students would normally be expected to stay in the same lab as their undergraduate research lab to complete their M.S. thesis research, so research rotations would not be required. Under special circumstances, students may switch laboratories following receipt of the B.S. degree, for example if there had been a close collaboration between faculty members. The idea is that the graduate research is an extension of the student’s undergraduate’s research and thus does not require the typical “ramp-up” training, etc. required for a newly entering student. The student still must complete sufficient work as a graduate student to make an original contribution to scientific knowledge.

M.S. thesis committees for 5YBS/MS candidates should be formed and meet during fall of the Senior year, to frame the plan for M.S. thesis research. This committee would also review the student’s progress over the Senior year and the student’s tenure in the graduate program, if some of research formed the basis for a Senior Thesis or a Scholar of the College thesis, to ensure sufficient original work was completed to merit completion of the undergraduate thesis and the master’s thesis.

5.3. B.S./M.S. Requirements & Typical Program Schedule

A minimum of 20 graduate credits is required for the Master of Science degree as part of the combined 5 Year, B.S./M.S. program in Biology— including the four Graduate Core courses (BI611 Advanced Genetics, BI612 Graduate Biochemistry, BI614 Graduate Molecular Biology, and BI615 Advanced Cell Biology); three additional Biology-approved Graduate Elective Courses (e.g., BI500+, BI800+), at least one of which must be a Biology-approved Graduate Seminar Course (e.g., BI800+); and a seminar course on Responsible Conduct of Research and Professional Development, BI880).

Example of a Typical Program for 5YB.S. /M.S. Students

(Attendance at Departmental Colloquia is expected of all full-time students throughout their program participation.)

Senior year: Begin Graduate Core coursework and/or take one or two Graduate Seminar(s), and begin M.S. thesis research

Summer 1: Research

Fall: Research, remaining fall Graduate Core modules + Graduate Seminar(s)/Elective(s)

Spring: Research, remaining spring Graduate Core modules + one Graduate Seminar(s)/Elective(s) + RCR/PD

Summer 2: Research, thesis defense

5.4. Thesis and Defense

See 4.2. above (M.S. Thesis and Defense)

5YBS/MS students are expected to publish peer-reviewed manuscripts, although publication of such work will not be a prerequisite for award of the M.S. component of the 5YBS/MS degree.

5.5. Schedule and Time Limitations

A student entering the Combined Program is required to pass the M.S. Candidacy Examination within five academic years plus two summers. If a student fails to graduate within the specified time, he/she would be given the option to switch into the 2YM.S.

After four years of work and after fulfilling the requirements for the B.S. degree, students would be awarded the B.S. degree. After one and one-half years of graduate work and after fulfilling the coursework and credit requirements for the M.S. degree, students would be awarded the M.S. degree.