

PLAN A (THESIS) MASTERS IN BIOLOGY

Note: These are the general degree requirements for the Plan A Masters. Entrepreneurial Biotechnology students should recognize that their degree track has additional requirements not included in this document. Please see <http://step.case.edu/biotech-curriculum/> for more information.

- A. Research advisor and area of study: Each student must meet with their advisor prior to registration each semester. If a new student does not yet have an advisor, the student should meet with the Director of Graduate Studies (DoGS), another member of the Committee on Graduate Affairs (CGA), or their designee to discuss recommended coursework.

By the end of the first semester, each student is expected to have identified a major area of study and to have selected a research advisor. These selections are revocable: the student may subsequently change area of study, advisor, or both without embarrassment to themselves or the advisor.

The research advisor is responsible for guiding the student in the selection of courses and other activities, such as seminars and journal clubs, appropriate for their training. The student, however, is free to – and encouraged to – consult with other faculty members for aid in course selection or with their research project, as the student deems helpful.

- B. Coursework requirements: Students are required to complete a total of 30 credits hours at the 300-level or above. Of these 30 credits,
- at least 18 credits must be at the 400-level or above
 - at least 15 credits must be in BIOL courses
 - at least 6 credits must be BIOL 651
 - ⇒ but no more than 9 credits of BIOL 651 may be counted
 - no more than 3 credits of BIOL 601 may be counted

Once a student registers in BIOL 651, they must continue to register for at least 1 credit of BIOL 651 per semester each semester thereafter.

A normal full-time course load is 9 credits per semester.

If a course is offered at both the 300- and 400-level, the 400-level version must be taken.

There is no limit on the number of BIOL 599 Advanced Independent Study for Graduate Students credits that can be used, but BIOL 599 should typically only be taken when formal coursework appropriate to the student's area of study is not available. Registration in BIOL 599 is by permission only and requires a course proposal form (available on the Biology Department website and the Graduate Programs canvas site) to be submitted and approved before the add/drop deadline.

Students are strongly encouraged to make an oral presentation at a colloquium, journal club, class, etc., and are encouraged to do so more than once.

- C. Academic standards: Any students whose course performance is not satisfactory may be terminated. A student's scholastic performance will be considered unsatisfactory if they do not maintain at least a B average (3.0 GPA or above on a 4.0 scale). In addition, any grade of

F (or NP or U), or the receipt of 6 or more credits of C or below, is considered cause for separation from the graduate program.

A student may appeal decisions made on the basis of these regulations. Such appeals will be heard by the CGA and the student's advisor. Decisions are made by a majority vote of the CGA and advisor.

- D. *Exit examination*: Completion of the Plan A Masters degree is contingent on passing an exit exam. This exam is taken during the final semester of study, and must be completed within 5 years of matriculation into the program. The student will be examined in their general knowledge of biology and ability to communicate and defend their thesis research.

The examination committee will consist of the student's advisor and 2 additional faculty members from within or outside the department, including those at affiliate organizations; tenured, tenure-track, adjunct, or secondary appointments; or others approved by the CGA. At least 2 members of the committee (including the advisor) must hold an appointment in the Department of Biology. An additional non-voting faculty member, typically a member of the CGA, will chair the exam.

Each semester, the university publishes its deadlines for graduation. It is the student's responsibility to be aware of and to meet all deadlines. The exit exam must be scheduled early enough in the semester for all required paperwork to be submitted before the deadline.

The steps for completing the exit examination are:

- a. *Approval of committee composition*: By the end of the first month of student's final semester, the student should submit by email to the chair of the CGA the names of all three voting members of the examination committee (the CGA will assign the non-voting member). As soon as the examination committee is approved by the CGA, the student should schedule an informal meeting with the whole committee, including the non-voting CGA representative. At this meeting, the format of the exam will be reviewed and each committee member will define the focus area on which they will ask questions during the comprehensive part of the exam. If possible, times and dates for the exam should be scheduled at this meeting.
- b. *Written thesis*: Before preparing a draft of the written thesis, the student should obtain all necessary style information from SGS. Ultimately, the thesis must be approved for defense by the student's advisor, but the student should also seek review by other qualified readers, including their committee members, to improve the quality of the document.

The written thesis must be approved by the advisor then presented to the examining committee at least 10 days before the oral defense.

- c. *Two-part oral exam*: These two sections of the exit examination are typically completed in a single session, and may be taken in either order.
 - i. *Oral defense of the thesis*: During this part of the oral exam, the student will be expected to answer questions about their research, demonstrating that they can defend their work.

- ii. *Comprehensive oral exam:* During this part of the oral exam, the committee will ask the student questions to test their general knowledge of biology, based on the focus areas established during the planning meeting.

Students are invited, though not required, to present a seminar on their thesis research. If they choose to do so, they should notify department staff of the time, place, and title of the seminar so that it can be publicized.

Examination results: The voting members of the examining committee will recommend one of the following courses of action, after all of the above steps are complete:

- Pass: all 3 examiners agree that the student has passed both parts of the exit exam
- Re-examination on one or both portions of the oral exam: at least 1 examiner votes to fail the student on one or both parts of the exam; the student will have the opportunity to repeat the failed portion(s)
- Failure: all 3 examiners vote to fail the student and do not recommend re-examination; or one or more examiners vote to fail the candidate upon re-examination. The student may appeal to the CGA for review. The CGA may then set another examination or re-examination, or sustain the exit exam committee's decision.

A student who passes both parts of the exit exam must submit all required forms and their final, formatted thesis to SGS before the graduation deadline.