

Biology Graduate Program – Thesis – Degree Requirements

About This Page

The material on this page represents the official policies of the Department of Biological Sciences. Please note that admission and degree requirements and deadlines in the university catalog or on the Research and Graduate Studies Web page may be incomplete. Applicants and students must follow the guidelines below.

In addition to the formal requirements, this page also includes practical information originally compiled in the Graduate Student Handbook. We hope that you can find the information you need on these pages. If not, please don't hesitate to ask other graduate students, faculty, or the graduate coordinator ([Dr. Kyle Piller](mailto:kpiller@selu.edu), 404 Biology Building, 985-549-2191, kpiller@selu.edu). In addition, if you notice important areas that were omitted, please bring them to Dr. Piller's attention.

Degree Requirements- Thesis Program

Minimum requirements for the Master of Science Degree (with thesis) in Biology are:

- 1) Thirty hours of approved courses in Biological Sciences, including six hours of Thesis (GBIO 770), two hours of Seminar (GBIO 691) with grades of B or better, at least 12 hours in courses numbered 600 or higher (or 50% of the total course load), not more than 10 hours of transfer credit, and not more than two hours of Research Problems (GBIO 660). All credits earned in the graduate degree program must be completed within six years. Some of these requirements can be confusing, so here is a little more information. For thesis hours (GBIO 770), a minimum of six hours must be taken, but additional hours can be taken if necessary. These hours get a grade of Incomplete until graduation, when they change to Passing. The other credits (excluding GBIO 770) must include no more than 50% 500-level credits, regardless of the total number of credits. For example, a student could not graduate with 12 credits at the 600 level and 13 credits at the 500 level, even though the total is sufficient. It would be necessary to take at least one more credit at the 600 level. Courses at the 500 level are cross-listed for undergraduates at the 400-level. Even though these courses meet together, they are not equivalent- the student must register for the 500-level offering for graduate credit.
 - 2) A cumulative grade point average of 3.0 in all graduate work pursued and not more than 6 hours with grades of C in the degree plan (grades below C are not acceptable for graduate credit).
 - 3) Passing the written entrance exam in the first semester and the oral comprehensive exam in the second semester.
 - 4) Attendance at departmental seminars (this means those given by visiting speakers, thesis defenses, and other public seminars, not GBIO 691).
 - 5) An acceptable thesis demonstrating both independent research and competency in scholarly exposition.
 - 6) Oral defense of the thesis.
 - 7) Recommendation for the degree by the student's thesis committee, Graduate Coordinator, Department Head, and Graduate Dean.
 - 8) Completion of necessary paperwork including, but not limited to, the Degree Plan, the Application for Candidacy, and the Application for Graduation.
- More details on these requirements are given Below in "Major Steps and Target Dates- Thesis Program". It is up to the student to keep abreast of any changes in these procedures.

Grade Requirements, Probation, and Suspension

Graduate students are expected to maintain a 3.0 grade point average. A student whose semester GPA is below 3.0 will be placed on probation. Probation status will be retained as long as the student's cumulative grade-point average is below 3.0. A student on probation may not enroll in graduate courses for Pass/Fail and must achieve a 3.0 semester grade-point average during the next semester of enrollment (including the summer term) or be suspended from graduate studies. Application for readmission may be made after one semester of suspension by submitting the appropriate form (available from the Graduate Coordinator) to the Dean of Research and Graduate Studies. After a second suspension, the student must wait one calendar year before applying for readmission. A third suspension results in final expulsion from the program without possibility for reapplication.

Graduate Program Personnel

This is the cast of characters relevant to graduate students (see also [Graduate Faculty](#)).

Graduate Coordinator

The Graduate Coordinator ([Dr. Kyle Piller](#)) is the administrative leader of the graduate program. His responsibilities include processing application materials within the department, advising new graduate students regarding course selection during the first semester, advising the student in the selection of a major professor, administering the oral and written

exams, providing necessary forms, maintaining a file for each graduate student, checking the final degree plan to verify that all course work is completed, attending the thesis defense, and approving the final copies of the thesis.

Department Head

The Department Head ([Dr. Brian Crother](#)) is the administrative leader of the Department of Biological Sciences. With regard to the graduate program, his responsibilities include attending the thesis defense, approving the final copies of the thesis, appointing and supervising all teaching assistants, and approving all budget expenditures.

Dean of Research and Graduate Studies

The Dean must approve and sign all forms pertaining to teaching assistantship appointments, degree plans, and final copies of the thesis.

Major Professor

The Major Professor is the individual who will most significantly affect a graduate student's career. Therefore, he/she should be chosen very carefully, but as soon as possible, certainly no later than the end of the first semester of enrollment (in practice, most major professors are selected before the student begins graduate work). The Major Professor should be chosen by mutual agreement. The Major Professor should warrant the professional respect of the student and share common research interests. Like the Thesis Committee (see below), the Major Professor must be a member of the Graduate Faculty.

Responsibilities of the major professor include:

- 1) Guide the student during all aspects of his/her master's degree program.
- 2) Head the student's Thesis Committee.
- 3) Assist the student in the preparation of a proposed degree plan.
- 4) Assist the student in the preparation of a thesis proposal.
- 5) Meet with student and thesis committee to approve the degree plan and the thesis proposal.
- 6) Advise the student continuously during the course of the thesis research.
- 7) Critically review and edit the thesis and lead the thesis defense.
- 8) Advise the student regarding potential job prospects or Ph.D. programs, and submit letters of recommendation if requested.

It is sometimes necessary to change Major Professors, either by the choice of the student or of the major professor. For the student to change, he or she must first find a new Graduate Faculty member willing to serve as Major Professor. As soon as possible (within two weeks) after identifying the new Major Professor, the Graduate Coordinator, the student's Thesis Committee, and the old and new Major Professor meet to review the status of the student, resolve any problems (e.g., commitments by the student for work), and, if necessary, form a new Thesis Committee (members of the original Thesis Committee are not required to stay on a new committee).

Thesis Committee

This Thesis Committee consists of the Major Professor and at least two other members of the Graduate Faculty. A qualified academic professional from outside the department or university may be appointed to the committee if the student, Major Professor, and Graduate Coordinator agree that such a person's expertise could benefit the student. The Thesis Committee will provide advice to the student in selection of courses and thesis research. The committee will be required to give final approval to the degree plan, thesis proposal, and thesis. They will also conduct the oral examination and thesis defense (other Graduate Faculty may also participate).

Major Steps and Target Dates

These steps apply to all graduate students intending to complete a degree. Any student with financial support from the department, regardless of the student's status, will follow this timetable. More details about the exams follow the concise timetable.

- 1) Apply for admission: Degree-seeking students must apply to the Department of Biological Sciences (see [Applying](#)). Acceptance into graduate school does not automatically assure acceptance into the graduate program in Biological Sciences. Departmental application deadlines are **1 December** (to begin in the spring) and **1 February** (to begin in the summer or fall). Applications submitted after these deadlines may be considered for acceptance on a case-by-case basis; however, late submissions potentially will not be considered until after the beginning of the following semester.

- 2) Take the preliminary written examination - About two weeks into the first semester, all new graduate students are required to take the preliminary written exam described below. The date for the exam will be announced by the Graduate Coordinator during the first week of the semester. All students must take the exam at this time.
 - 3) Name Major Professor - No later than the end of first semester, students must name their major professor. Students who are undecided should see the Graduate Coordinator well before the end of the first semester.
 - 4) Name other committee members - The rest of the student's Thesis Committee should be named by the end of the first semester of enrollment.
 - 5) Meet with Thesis Committee to:
 - a) File Proposed Degree Plan - prior to enrollment for the second semester (form available from the Graduate Coordinator). One original copy of this form will stay with the Graduate Coordinator, the other will go the Graduate Dean.
 - b) Submit Thesis Proposal - no later than the end of second semester (guidelines available from Graduate Coordinator).
 - 6) Take Oral Examination - No later than the end of the second semester, the student must take the oral exam (see below for details). If necessary, students not setting a date by the end of the second semester will have a date set for them by the Graduate Coordinator. Note that the student is responsible for notifying his/her committee and the Graduate Coordinator of the proposed date well in advance. The date must be approved by the committee and the Graduate Coordinator before the exam can be scheduled.
 - 7) Complete all course requirements and correct all deficiencies.
 - 8) Serve as a TA for at least one class for at least one semester - All students, regardless of their financial support, must spend at least one semester in the classroom as part of their graduate training. This does not necessarily require a full-time TA position. It is up to the Thesis Committee to document, in advance, how this requirement will be met for students not working as TAs for the department.
 - 9) Complete thesis research.
 - 10) Apply for graduation. Forms for this purpose are available from the Office of Research and Graduate Studies. Deadline dates are early September for fall graduation, early February for spring graduation. A \$10 diploma fee must also be paid. This fee is non-refundable if the student does not graduate as planned.
 - 11) Submit thesis to committee for review. You must allow ample time for revisions. In practice, you will find that you will need at least three months to write your thesis and have it reviewed by your committee. Six months is much more likely.
 - 12) Complete final version of thesis.
 - 13) Schedule Thesis Defense (see below for details).
 - 14) Submit three approved (signed) final copies of the thesis to the Office of Research and Graduate Studies. At this point you must have paid your binding fee (see 15). Theses are due no later than the Monday of finals week each semester.
 - 15) Bind thesis according to Research and Graduate Studies protocol.
- In practice, the best way to make sure that all the administrative details are followed correctly is to talk to students that have recently finished. Stay informed. It is entirely possible that some detail can thwart graduation for a semester.

Written Examination

During the first two weeks of the first semester of enrollment, each graduate student will be required to take a written examination, equivalent to a final exam in a freshman-level general biology course. The goals of this exam are to: (1) insure that new students begin their graduate studies with a review of basic biology; (2) insure that new students are capable of conducting graduate-level work; and (3) determine if the student is capable of teaching freshman labs. Students who fail the initial exam (70% is considered passing) must retake the exam two months after the first attempt. If the student fails the exam a second time, then he/she will be dismissed from the thesis program. Since 1988, about 40% of our new graduate students have failed this exam on the first attempt, although it has rarely been failed on the second attempt. This should be taken into account when deciding how much effort should go into studying for the exam. Please see the Graduate Coordinator for more details.

Oral Examination

The Oral Exam must be taken no later than the end of the second semester of enrollment. The goals of this examination are three-fold:

- (1) Determine if the student has an understanding of the fundamental areas of biology, especially those related to the area of specialization.
- (2) Determine if the student has a sufficient grasp of his/her area of specialization to permit thesis research to begin. Some very detailed questions about your area of specialty can thus be anticipated.
- (3) Give the student rigorous practice in a vital professional skill, i.e., oral communication.

The general format of the Oral Exam will be as follows. The faculty in attendance include the student's Thesis Committee, the Graduate Coordinator, and an additional outside faculty member chosen by the Graduate Coordinator. If the Graduate Coordinator is on the committee, two additional outside faculty members will attend if possible. The exam will last about two hours, roughly half for questions in general biology and half in the area of specialization. After all questioning is completed, the examiners meet to review the student's performance. If the faculty feel that the student has not displayed a sufficient grasp of either general biology or the field of specialization, then the student may be required to retake the exam, or designated sections of the exam. The committee may also require additional courses, a written exam on a certain topic, an undergraduate lecture, or other remedies for weaknesses. Only in extreme cases will the student be required to take the entire exam again. In such cases, at least one month must be allowed between exams. An unacceptable performance on the retest, as determined by the committee, will result in expulsion from the program. One note on philosophy. Contrary to popular belief, oral exams are not designed to be torture sessions for students, but are necessary to see if students are ready to discuss their knowledge in a professional manner, and defend their ideas and opinions from critique by their peers. We think it is crucial for students to be thoroughly trained in this aspect of academia, and encourage students to begin preparing for their orals well in advance by continually holding practice sessions with fellow students or faculty.

Scheduling the Thesis Defense

It is often difficult to schedule defenses. The only way to be sure of defending in a given semester is to have a very nearly complete thesis by the middle of the semester. It is up to the student's Thesis Committee and the Graduate Coordinator to determine if the thesis can be defended. This policy is described more completely below.

The student will schedule his/her thesis defense only after a draft of the thesis has been approved by the student's Major Professor and Thesis Committee. The first step in this process is to complete a draft thesis that the student's Major Professor agrees is adequate to be reviewed by the other committee members. The student then submits this draft thesis to the Thesis Committee and schedules a committee meeting within the next 1-2 weeks. At that meeting, the Major Professor and committee members will determine if the thesis is suitable to be defended. If so, the committee will authorize the Graduate Coordinator to schedule a convenient time. A defense cannot be scheduled without the explicit approval of every member of the committee.

The Thesis Defense may be scheduled at any time provided the student's Thesis Committee and the Graduate Coordinator are available. It is the student's responsibility, in consultation with the Major Professor, to schedule the meeting in order to accommodate these individuals. Other graduate faculty are encouraged to attend at their convenience, so the date and time must be announced and posted around the department at least one week prior to the defense to properly notify all faculty. It is also the student's responsibility to schedule an adequate room in which to hold the defense.

Students should be aware that scheduling may be difficult between semesters or during the summer when many faculty are away from the university. The defense (and graduation) may be delayed several weeks (or months) if the necessary faculty are not available, so plan ahead!

Finally, a bit of advice. We have found that it usually takes about twice as long to write and defend a thesis as a student usually believes, so keep this in mind when making career plans!

Thesis Defense

As part of the Thesis Defense, the student will be required to present the thesis results in the form of a seminar open to all faculty, students, and other interested individuals, and to respond to questions from the audience. Following the seminar (usually immediately following but in no case more than five days after) the student will defend the thesis in a session open only to the Thesis Committee and Graduate Faculty. The Graduate Coordinator and Thesis Committee are required to attend this meeting, at which the student will answer questions related to the thesis research.

At the conclusion of the examination, the committee and Graduate Coordinator will meet in closed conference to determine whether the student has demonstrated a thorough and successful defense of the thesis and a level of knowledge in biology justifying the Master of Science degree. Additional modifications of the thesis may be required at this time. After final approval, each committee member, the Graduate Coordinator, the Department Head, and the Dean must sign the title page of the thesis and the examination report and thesis approval form.

Thesis format

All theses must follow departmental format guidelines. See the Graduate Coordinator for advice on thesis format.

Preparing a C.V.

Graduate students are strongly urged to prepare a curriculum vita. A sample C. V., which may be used as a model, is available from most faculty members. A current C.V. is usually required when you are applying for advanced graduate or

professional studies. Your C.V. should be updated at least annually and whenever significant new information such as publications, papers presented, grants received, etc. becomes available.

Tuition and Fees

A complete listing of tuition and fees for SLU graduate students is available from the registrar's office. In general, students holding [Graduate Assistantships](#) (GA) (see Financial support below) have all of their in- and out-of-state tuition waived, and are responsible only for paying registration fees. Students without GAs must pay tuition in addition to these fees. Fees tend to change from semester to semester; see the Graduate Coordinator, a current catalog, or the university home page for additional details.

Financial Support

Qualified graduate students can apply for teaching assistantships (TAs). These provide a complete tuition waiver (in and out-of-state) plus a stipend for teaching laboratory sections of undergraduate courses. The minimum stipend for a TA is currently \$2200, but most semesters we are able to offer about \$3000. Many TAs also receive some support during the summer, usually about \$1000 plus tuition. TAs are generally required to devote 20 hours per week to duties assigned by the Department Head and Graduate Coordinator. TAs must be enrolled full time, for at least 6 credits in the spring and fall and 3 credits in the summer. We know that this support is low; we are actively campaigning to the administration for higher stipends. Some graduate faculty offer additional support to their students through research grants. Salary and responsibilities are determined by the nature of the research project. In other cases, students receive Research Assistantships (RA's) instead of teaching.

Teaching assistantships are awarded on a competitive basis. The graduate faculty will rank the candidates according to several criteria including GRE scores, grade point average, letters of recommendation, and the selected discipline of the student. Usually the department will be committed to the financial support of selected teaching assistants for a period of two years, provided adequate funds are available and the student is making satisfactory progress toward the degree. Financial support will be extended for a third year if the student is making satisfactory progress towards the degree. In practice, this support is usually extended, so a Regular status TA making acceptable progress can count on six semesters of support. Teaching assistants, as well as other graduate students, are expected to present themselves and act in a manner which is a credit to the teaching profession. This should include the wearing of appropriate attire during their periods of classroom instruction and adherence to the University's professional code of ethics.

Other forms of financial aid may be available to some students in the form of fellowships or scholarships. For additional information, contact the Graduate Coordinator or the campus [Financial Aid Office](#).

Ethics

Graduate students in the Department of Biological Sciences are bound by the ethical standards given below. Teaching Assistants should also be cognizant of the specific responsibilities which accompany their position.

- 1) All students should be committed to upholding general standards of professional conduct. Fabrication of data, plagiarism, receiving prohibited outside assistance with graded assignments, and cheating on exams are considered to be extremely serious breaches of conduct that will result in the immediate dismissal of the student from the program. Students having specific knowledge that other members of the department have violated this code of ethics are honor-bound to report such violations to their Major Professor or the Graduate Coordinator immediately. If you are unable to fulfill this obligation, then you should not attend this university.
- 2) Students should deal seriously and conscientiously with teaching assignments, including careful planning of courses, preparation of lectures, regularity in meeting scheduled classes, clearly informing students of course requirements and the grading system, and fair and impartial grading according to standards established by the University.
- 3) Teaching Assistants must recognize that students deserve respect as individuals and that they have certain rights that must be protected. This includes courteous treatment of students in class and during office hours.
- 4) Students should recognize that the Teaching Assistant serves as a model and exercises a great influence in shaping the minds of students. The teacher must set a high standard in academic and professional excellence, personal integrity, and professional ethics.
- 5) Teaching Assistants should recognize that in his or her influential position in the classroom he or she is morally and ethically bound not to introduce into the classes discussions of subject matter outside the scope of the course and not within the field of his or her professional competence.

Violation of the Code of Ethics may be grounds for termination of the assistantship or dismissal from the University.

Equipment and Supplies

Teaching equipment and supplies

Materials needed for teaching are available for all TAs. Expendable office supplies are available at the departmental office. More specialized supplies are generally available in the lab where you teach, or can be ordered by Frank Campo, General Biology Lab Coordinator. Check with him if you lack something you feel is essential. Equipment such as overhead projectors, video recorders, movie projectors, and slide projectors are available through the departmental office and the Center for Faculty Excellence. You should make your needs known to office personnel at least an hour prior to class.

Research equipment

With few exceptions, the department does not maintain a centralized equipment storage area; equipment for research is generally made available through specific faculty members.

Departmental Services

Mailing

Normally, the department will pay postage for professional mailings such as submission of manuscripts, requests for information from colleagues, registration for meetings, etc. All mail must have a Biology Department return address and budget number (1125), and be placed in the outgoing mailbox in the main office. Mail is normally delivered to the SLU post office in the mid-afternoon.

All graduate students are provided with a departmental mailbox, located in the Biology office. Mail is usually delivered in the late morning. The department address should not be used for personal mail unrelated to graduate program or department activities.

Telephones

Telephones for local calls are available in the graduate student offices. Graduate students may also use the phone in the department office for their professional long-distance calls. With permission, students may also utilize their Major Professor's phone for professional calls. Long-distance personal calls are not permitted.

Vehicles

The department has two vehicles for research and class field trip use: a pickup truck and a 15 passenger van. Regulations regarding the use of these vehicles are available through the departmental office. Students wishing to use these vehicles must have completed the University Driver's Education Course, and must reserve the vehicles ahead of time. The Department Head must approve all requests for using the departmental vehicles. University vehicles may be requested through the Physical Plant, by completing a University Reservation Request. Both the department Head and the Physical Plant must approve this request. Driving the 15-passenger van requires a chauffeur's license.

Xeroxing

Materials for the courses you are teaching may be duplicated without permission, as may brief professional materials. Students may not copy books, monographs, or other lengthy materials without the permission of the Major Professor or the Department Head.

A) Preferred Procedure--Obtain and fill out a "Xerox Request Form" from the office. Take the form and the originals to "The Document Source" in the Student Union.

B) Alternative Procedure--If you have missed the 24 hour deadline, use a xerox card and copy machine in room 329 Biology Building. This card should also work in the library.

NOTE: It is assumed that students will use this service responsibly. Failure to follow these procedures will result in permanent loss of xeroxing privileges.

Obtaining Keys

Graduate students may acquire keys to the buildings, their offices, general laboratories in which they teach, and other specialized facilities (e.g. the museum, herbarium) if their work requires access to them. Request keys using a Service Request form, available at the Department office. **DO THIS IMMEDIATELY UPON ARRIVAL ON CAMPUS! KEY REQUESTS TAKE A MINIMUM OF ONE WEEK TO BE FILLED.**

When the keys are ready, you must go to the Physical Plant to pick them up. There is no charge to get keys, but you must return all of them in order to graduate. If you have lost any, you will be charged dearly so that the locks and keys for everyone else can be changed.

Department Stationery

Students should understand that use of departmental stationery implies the approval of the university. Thus, letters expressing the personal viewpoint of the student (e.g., letters to the editors, etc.) should not be written on letterhead

without the approval of the Department Head. Use of departmental letterhead in an unauthorized manner may result in severe disciplinary action.

Library Facilities

All library materials are centrally located in Sims Memorial Library. The Reference Department, Interlibrary Loan, Card Catalog and Circulation Desk are located on the first floor. The reading room on the second floor contains the current, unbound issues of all journals. Microfilm and microfilm readers are located in this room. The audio-visual center and microcomputer lab are also located on the second floor. The third floor houses bound journals and government documents. Books are located on the library's fourth floor.

In addition to housing an good collection of biological journals, the library has an Interlibrary Loan service for the convenience of faculty and student researchers. Most articles requested through interlibrary loan are provided without charge, although a fee is required for certain articles.

Other computer searches are available and can be requested at the Reference Desk. Of all available searches, the most useful for most biology graduate students is BIOSIS, which searches Biological Abstracts. An added advantage of BIOSIS searches is that they are conducted without charge to the user! Be sure to tell them that you are conducting a graduate research project, or you may be charged for the service.

Many faculty and graduate students also take advantage of the convenience of having the LSU Middleton Library within one hour's drive of campus.

Research with Animals or Wild Plants

All research conducted by SLU faculty and students is subject to regulations established by the [Institutional Review Board \(IRB\)](#) and the [Institutional Animal Care and Use Committee \(IACUC\)](#). The IRB reviews research protocols that involve human participants, and hazardous or controlled substances, and the IACUC, protocols involving non-human vertebrate animals. These committees evaluate the ethical, safety, and legal implications of research and classroom activities conducted by individuals affiliated with Southeastern. This review process is intended to protect the researcher/instructor by ensuring proper adherence to guidelines and regulations. The policies and procedures followed by the IRB and IACUC exist to guide individuals in the ethical and legal responsibilities set forth by federal and state governmental statutes and by the University.

Please visit the [IRB](#) or [IACUC](#) web sites to obtain forms or contact the [IRB](#) and [IACUC](#) representatives for more information.

Biology Graduate Student Organization

Graduate students in Biology are automatic members of this organization, the purpose of which is to provide graduate students the opportunity for exchanging information, getting acquainted, and for official representation in departmental and university business. Recently, the organization has recommended future graduate courses, has held various socials and field trips, and has received financial support through the university Student Government Association for members to present papers, attend scientific meetings, and invite distinguished scientists to the Biology Department Seminar Series. All graduate students are encouraged to participate in this important professional society.

FOR FURTHER INFORMATION, CONTACT:

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