

GRADUATE STUDIES IN BIOLOGY

Department of Biology
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Introduction

The purpose of graduate school is to offer students advanced instruction and intellectual training in specialized areas of interest. Graduate education differs fundamentally from undergraduate education in emphasizing independent scholarship. A graduate student is expected to assume increased responsibility and employ greater initiative in his or her academic endeavors. Graduate students are exposed to current and classical literature, encouraged to work independently, and trained to critically interpret the results of and determine the significance of research (theirs or others').

The ULM Department of Biology is a vibrant, engaging, intellectual environment where the best and brightest study and conduct research with outstanding faculty. Our goal is to produce graduates who truly appreciate the significance of biology in a modern world and who are well prepared for their next challenge. We are devoted to our science and are very pleased to have the opportunities to share our discoveries with others in the classroom and laboratory. Currently, 13 members of the Biology faculty hold full Graduate Faculty Membership on the ULM campus and are actively involved with directing and mentoring graduate students. Graduate students in Biology work towards earning the Masters of Science degree. The Department offers a thesis and non-thesis degree, both requiring thirty-three graduate hours to complete. Areas of study include Botany, Microbiology, Genetics and Molecular Biology, Physiology, Conservation Biology, Systematics, Wildlife Management, and Zoology.

Program Admission

In addition to the University requirements for admission to the Graduate School, which includes a minimum undergraduate GPA of 2.5, applicants for Regular admission to the Master of Science in Biology will meet one of the following criteria:

- 1) A minimum score of 900 on the GRE General Test (Verbal + Quantitative); or
- 2) A minimum of 2400 points, determined by multiplying the total undergraduate GPA by the combined GRE General Test score (Verbal + Quantitative).

Applicants who fail to meet the above standard may be admitted on Conditional status as recommended by the Biology Committee on Graduate Studies to the Department Head in concert with the Dean of the Graduate School (see ULM Graduate Catalog for Conditional admission requirements).

Sponsor/Major Advisor

Once the application materials have been received by the Graduate Coordinator in the Department of Biology, potential students will be contacted to determine if they have a sponsor/major advisor. This person is a full member of the Graduate Faculty that serves as the student's advisor for their graduate career. Potential graduate students may request assistance in finding a sponsor/major advisor from the Department's Graduate Coordinator, but it is ultimately the student's responsibility to secure a sponsor. A student **WILL NOT** be admitted without a sponsor/faculty advisor.

Program Requirements

Undergraduate requirements include a B.S. or B.A. in a biological sciences discipline or a bachelor's degree with sufficient science background. Selected undergraduate biology classes may be identified as deficiencies by the student's graduate advisory committee.

A candidate for the Master of Science degree pursuing the thesis option must complete a minimum of 33 semester hours of biology and related courses, including six semester hours of Biology 599.

A candidate for the Master of Science pursuing the non-thesis option must complete a minimum of 33 semester hours of biology and related courses. Non-thesis candidates must enroll in Research Methods (Biology 5005 & 5006) twice during their degree program—once with an organismal focus and once with a cell/molecular focus. Only one 4000-level course may be taken each semester and no more than six credit hours of coursework from outside the Biology curriculum will be accepted toward the non-thesis degree. Biology 5099 credit hours are not applicable to the degree plan of non-thesis candidates. A graduate student may only transfer nine semester hours from the M.S. Thesis option to the M.S. Non-Thesis option.

NOTE: Required of **ALL** Biology graduate students (Thesis and Non-Thesis)

1. at least half of the total course work in the major area and one-half the total course work must be composed of 5000-level courses
2. no more than three credit hours of Biology 5091 or Marine Science 5091 can count toward the degree
3. successful completion of 2 hrs of Biology 5007 (Seminar)
4. successful completion of 2 Biology courses at the 5000-level (minimum of 6 hrs) beyond the required courses – not including Biology 5091 or Marine Science 5091
5. successful completion of written comprehensive exams

Graduate Assistantships

A limited number of assistantships are available through the Department of Biology. The application for an assistantship is a separate process from the application for admission. Applications may be obtained from the ULM Graduate School website. To be considered for an assistantship, a student must be admitted to the Biology M.S. Thesis option in Regular status and provide three letters of recommendation. Students admitted to the M.S. Thesis option under Conditional status may be eligible for an assistantship but only if they were admitted with a deficiency in undergraduate course pre-requisites. Students admitted to the Biology M.S. Non-Thesis option are generally not considered to be eligible for assistantships. An exception MAY be made if the Department is in dire need of TA's and a qualified Non-Thesis graduate student has a minimum of 18 graduate hours in Biology.

To be considered for a Teaching Assistantship, a student must score a minimum of 350 on the Verbal section of the General GRE exam. International students seeking graduate assistantships must be able to demonstrate adequate communication skills, in addition to the minimum TOEFL scores required by the Graduate School.

Graduate assistants are expected to work 20 hours per week during the regular semester or summer session in which they hold an assistantship. They may not hold a concurrent graduate work-study position or another graduate assistantship.

Graduate assistants must be registered for at least 9 hours of graduate credit each regular semester and a minimum of 3 hours for each summer session of employment. Undergraduate course deficiencies may count toward these hours with approval of the major professor and Dean of the Graduate School (approval is indicated by a signed degree plan in the student's file). Assistants must show satisfactory progress towards their degree and fulfill the duties of their appointment. Renewal of assistantships is not guaranteed. Students are limited to 6 regular semesters of assistantship support. Appeals to this limitation may be considered by the Department's Graduate Studies Committee and the Dean of the Graduate School.

Teaching Assistantships: The stipend for a 9 month Teaching Assistantship is currently \$8,000 (or \$4,000 per regular semester). Duties of a TA include, but are not limited to the following: teach the equivalent of three two-hour laboratory sections per semester, attend all scheduled lab coordination meetings, maintain posted office hours, laboratory set-up and clean-up, maintain records for all students enrolled in their classes, proctor lecture classes, and attend all meetings called by the Department Graduate Coordinator or Department Head. Summer Teaching Assistantships are occasionally available.

Research Assistantships: Assistantships are occasionally available through individual faculty members who have grants to support graduate students. The duties and stipend are determined by the faculty member holding the grant. Students on an RA are expected to attend all meetings called by the Department Graduate Coordinator or Department Head.

Tuition Waivers

Students receiving assistantships are also awarded a tuition waiver. In-state graduate tuition and out-of-state fee will be waived for the regular semester or summer session during which a student holds an assistantship. The out-of-state fee is also waived for the summer term following the spring semester in which an assistantship is held if the student does not graduate that semester. Graduate assistants are required to pay general fee, activity fee, ID validation fee, technology fee, and if applicable, a vehicle registration fee and international student service and insurance fees.

Major Professor

The major professor serves as the primary advisor for a graduate student during the student's tenure in the Biology graduate program. The *Major Professor Recommendation/Approval and Appointment Form* (www.ulm.edu/gradschool/GradSchoolForms.html) MUST be submitted to the Biology Department Head by the end of the student's first semester. Students without a major professor will not be allowed to continue in the program.

The major professor for a Thesis M.S. graduate student advises in the areas of research and course work. The major professor is responsible for lifting advising flags, selecting courses for the student's degree plan, approving all required forms, overseeing the comprehensive exams and directing the research project through completion and submission of the thesis to the Graduate School. The focal point of the Thesis graduate student's program is the research project.

The major professor for a Non-Thesis M.S. graduate student advises in the area of course work. The major professor is responsible for lifting advising flags, selecting courses for the student's degree plan, approving all required forms and overseeing the comprehensive exam.

Graduate Advisory Committee

Graduate students should establish an advisory committee by the end of the second semester of enrollment. The advisory committee is composed of the major professor and two other members of the ULM Graduate Faculty. Members of the committee are selected in consultation with the major professor. The student is then responsible for obtaining the consent of the selected faculty to serve on the committee. At least two members of the committee must be members of the ULM Department of Biology. On occasion there is need for committee appointment of individuals with special expertise not available on campus. The student's major professor may nominate that person for Adjunct Faculty status through the Provost's office, and then for Associate membership on the ULM Graduate Faculty through the Graduate School. This should be done well in advance of committee designation. Once committee members have agreed to serve, a memo is submitted to the Dean of the Graduate School indicating the advisory committee make-up. The graduate advisory committee for Non-Thesis M.S. students will be composed of two faculty members that are selected by the Department Head for that student's cohort group. They assist the major professor with advising, the degree plan, and the comprehensive exam.

Degree Plan

A proposed plan of course work, called the degree plan, should be approved during the first meeting of the graduate advisory committee. The degree plan lists the student's deficiencies (if any), and courses to be taken in the major area, minor area (if applicable) and related course work from other departments. All members of the advisory committee will sign the completed *Degree Plan* (www.ulm.edu/gradschool/GradSchoolForms.html) that is submitted to the Dean of the Graduate School.

Note on course load: Graduate students may take up to 18 hours per semester, unless they hold an assistantship. Graduate assistants must have approval of the major professor and Dean of the Graduate School to enroll in more than 15 hours in a regular semester. Nine hours is the minimum enrollment in a regular semester and three hours in a summer semester for a full-time graduate student and is required for the student to receive an assistantship. Graduate students may enroll in a maximum of seven hours during a summer semester.

Comprehensive Exams

Written comprehensive exams are administered to Thesis and Non-Thesis M.S. students. The exams are scheduled within a time period specified in the calendar circulated by the Graduate School. Written comprehensive exams may be taken by the graduate student during any semester once the student has enrolled in all courses on the degree plan. Questions for the Thesis M.S. students are submitted by each member of the student's graduate advisory committee. These questions may be derived from material covered in classes the student has had under a committee member or refer to a student's area of research interest. Questions for the Non-Thesis M.S. students are submitted by faculty who have taught each class listed on the student's degree plan. These questions will be gathered by the Major Professor and administered to the student.

Oral comprehensive exams are given to Thesis M.S. students at the conclusion of the Thesis Seminar, and only occur after successful completion of the written portion of the comprehensive exams. Advisory committee members examine the student's rationale, hypothesis, analysis, conclusions, and general knowledge of the subject area. A student may also be queried on subject matter that was covered on the written exam, especially if the student's response on the written exam was weak. Graduate students **MUST** successfully complete the oral comprehensive exam to fulfill the requirements for the Thesis M.S. degree in Biology.

Thesis Seminar

Prior to graduation and before submission of the thesis to the Graduate School, all Thesis M.S. students **MUST** present their research to the entire department in a seminar that addresses their thesis project and conclusions. Public notification of the date, time and location of the Thesis Seminar should occur no less than 5 working days prior to the event. Successful completion of the Thesis Seminar is indicated by all advisory committee members approving (by their signature) the thesis submitted by the student to the Graduate School.

Checklist of Forms and Required Materials

Prior to Admission:

Application for Admission (www.ulm.edu/gradschool/admis.html)

Official Undergraduate Transcripts

Official GRE Scores

Application for Assistantship (www.ulm.edu/gradschool/GA_Application_Form.pdf)

Three Letters of Recommendation (on letterhead stationery or form
www.ulm.edu/gradschool/GA_Recommendation_Form.pdf)

After Admission:

Major Professor Recommendation Form

(www.ulm.edu/gradschool/Major_Professor_Recommendation_Form.pdf)

Graduate Advisory Committee Recommendation Memo (completed by Major Advisor)

Degree Plan – Signed (www.ulm.edu/gradschool/Degree_Plan.pdf)

Application for Comprehensive Exams (completed in the ULM Graduate School office)

Application for Graduation (completed in the ULM Graduate School office)

Comprehensive Exam Report (completed by Major Advisor and signed by Graduate Advisory Committee members)