

BIOLOGICAL SCIENCES, MA

The Master of Arts (MA) in Biological Sciences is a course-work only degree designed for individuals who wish to enhance their knowledge of foundational concepts in Biological Sciences and gain practical hands-on training in controlled laboratory exercises, data analysis and presentation as well as scientific pedagogical practices. This degree does not require the traditional intensive commitment to data-driven research that is the hallmark of the Master of Science (MS) degree in Biology.

Admission Requirements

See the Admission Criteria section of this catalog for more information.

Curricular Requirements

Code and Title	Hours
Courses Required for All M.A. Students	
BSC 604 or BSC 610	3
Sci Writing and Presentation Pedagogy in Biological Science	
BSC 505	2
Intro to Grad Studies	
BSC 601	1
Biological Sciences Seminar (required each semester in residence at the Tuscaloosa campus)	
At least one course designated as laboratory 3-4	
BSC 511	
Phage Discovery Laboratory	
BSC 520	
Principles Of Systematics	
BSC 525	
Human Physiology Lab	
BSC 526	
Computational Biology Lab	
BSC 528	
Biology Of Fishes	
BSC 534	
Plant Systematics	
BSC 539	
Bch/Molecular Biology Lab	
BSC 542	
Integrated Genomics	
BSC 553	
Biochemistry Lab	
BSC 558	
Drug Discovery Laboratory	
BSC 564	
Biology Of Algae	
BSC 569	
Histology Of Vertebrates	
BSC 575	
General Entomology	
BSC 576	
Aquatic Insects	
BSC 656	
Microscopical Techniques	
Biology Electives 8-20	
BSC 512	
Limnology	
BSC 515	
Wetland Ecology	
BSC 516	
Disease Ecology	
BSC 517	
Environmental Modeling	
BSC 519	
Evolutionary Genomics	
BSC 521	
Pers Gen Med	
BSC 522	
Biology of Cancer	
BSC 524	
Human Physiology	
BSC 530	
Introduction to Pharmacology	
BSC 531	
Pathogenic Microbiology	
BSC 535	
Immunology	
BSC 541	
Developmental Biology	
BSC 544	
General Virology	
BSC 548	
Animal Behavior	
BSC 549	
Endocrinology	

BSC 550	Fundamentals of Biochemistry	
BSC 551	Bch/Molecular Biology II	
BSC 555	Chemical Ecology	
BSC 556	Microbial Ecology	
BSC 565	Principles Of Toxicology	
BSC 570	Prin Pop Genetics	
BSC 571	Plant Physiology	
BSC 573	Bioinformatics	
BSC 580	Plant Ecology	
BSC 581	Adv Biostatistics with R	
BSC 582	Conservation Biology	
BSC 583	Evolution	
BSC 585	Found Forest Res and Conserv	
BSC 587	Biogeography	
BSC 590	Stream Ecology	
BSC 594	Signal Transduction Neuroby	
BSC 666	Disease Models and Mechanisms	
BSC 675	Global Change Biology	
BSC 695	Spec Topics Biolog Sci	
Total Hours		30
BSC 696	Resident Study	2-6

A minimum of 30 credit hours of graduate coursework is required including:

- At least 26 credit hours with a letter grade (i.e., not Pass/Fail)
- A maximum of 6 credit hours with a letter grade may be taken from BSC 696 Resident Study.
- At least one course designated as laboratory must be completed.
- M.A. students are required to enroll in BSC 505 Intro to Grad. Studies. Additionally M.A. students must enroll in either BSC 604 Scientific Writing or BSC 610 Pedagogy in Biological Science.
- NOTE: Up to 4 hours of Pass/Fail credit can be applied toward fulfillment of degree requirements. Only BSC 601 Biological Sciences Seminar may be applied as Pass/Fail credit for the M.A. degree.
- Of the 30 required credit hours, 18 must carry the BSC or MS designation.

All courses taken for MA graduate credit hours must be numbered 400 and above. A maximum of 6 semester hours of 400-level course credit may be accepted for a master's degree only if all the following apply:

1. The 400-level courses taken are outside the Biological Sciences Department.
2. The department offering the 400-level course offers a graduate degree.
3. The 400-level course must carry appropriate extra work to be counted for graduate credit.
4. The student must have the consent of his/her committee chair.
5. Please contact the graduate program assistants to initiate this form through DocuSign.

Candidates for the M.A. degree must complete a culminating "Capstone" experience – a written review of a relevant topic in Biological Sciences and give a public presentation on the scope of this review (see Section 6, below).

BSC 598, BSC 599, BSC 507, BSC 607, or BSC 698 may not be applied toward this degree.

Transfer Credit

See information on transfer credit.

Comprehensive Exam/Capstone

Culminating “Capstone” Experience: In addition to earning a minimum of 30 semester hours of credit, candidates for the M.A. degree are required to complete the following Capstone Experience:

In-depth topical literature survey. Students must prepare a formal paper, publicly present and pass an oral exam on a literature topic approved by the M.A. Advisory Committee. During the semesterly committee meetings the student and committee members will establish specific timelines, due dates, a topic and parameters of the written review (page length, style, citation number etc...). The timelines will address when the topic must be selected and approved, when a first draft of the outline and citation list must be provided to the committee, as well as when the first and penultimate drafts of the document must be submitted to the committee and comments returned to the student.

Formal Departmental Seminar: The public presentation of your work is a requirement for graduation. Master’s students must present their research at the Departmental Symposium in the first or second semester prior to graduation. Those students with a documented reason for not presenting should petition the Biological Sciences Graduate Committee for an exception to this rule.

Presentation and Oral Examination: In addition to participation in the departmental research symposiums, a publicly announced final formal departmental presentation on the topic of the student’s literature review is required for M.A. students. The oral exam will take place immediately following the public seminar. All students are required to notify departmental office personnel of the date, time and room location of their formal presentation a minimum of 14 days prior. A title and an abstract must be submitted to the departmental office at the time of notification so that a public announcement can be made.

In addition, a copy of the final draft of your review must be made available to BSC faculty wishing to review it. The report will be posted in a password-protected Box folder during the 2-week period preceding the examination. The absolute final date to schedule the formal departmental presentation and oral examination is the day preceding that set by the graduate school as the last day to report the results of final comprehensive examinations.

Failure to meet any of these requirements will result in a delay of the M.A. examination.

Final Oral Examination: All M.A. students must pass a final oral examination related to their literature survey topic. Final oral examination questions may also include subjects beyond the student’s literature review and reflect material pertinent to graduate-level coursework undertaken by the student. Final oral examinations must be taken not less than two weeks prior to the proposed graduation date. All committee members must attend and participate in the oral examination. Committee members may participate virtually in the case of illness or required travel, if the member(s) can see and hear the presentation and actively participate in questioning of the candidate. The student’s advisor must adhere to the technical requirements put forth by the Graduate School. Under exceptional circumstances, the student may be allowed to participate virtually. The student must obtain the approval of their committee chair and petition the BSC Graduate Program Director. All

students are required to notify the departmental office of their final oral examination 14 days prior to the exam.

All departmental faculty have the right to attend the oral examination and have the right to ask questions of the student that are relevant to the goals of the examination. Only faculty on the student’s committee may vote on whether the student has passed or failed the examination.

Time Limits for Degree Completion

See information on time limits for degree completion.

Student Progress Requirement

M.A. Advisory Committee: A student must form an M.A. Advisory Committee prior to their first committee meeting. The first committee meeting must be held no later than one month after completion of the first semester of studies (by January 31st for students entering in the fall semester and by June 30th for students entering in the spring semester) to evaluate progress toward a degree. Earlier meeting dates may be held at the student’s request. In subsequent Fall and Spring semesters of study, the committee will meet prior to April 15th or December 15th to review progress during the previous semester. It will also meet as needed to administer all final examinations, and to examine and approve the culmination Capstone Experience.

The M.A. Advisory Committee must consist of at least three members. All members of an M.A. Advisory Committee must be members of the Graduate Faculty. The Department Chair is a non-voting, ex officio member of all graduate student committees. The Chair of the M.A. advisory committee may be any tenure/tenure-track member of UA Biological Sciences faculty. By default, the Chair will be the director of the M.A. program, unless the student selects another faculty member who agrees to this responsibility.

Annual Progress Review: First year students must meet with their committee after completing the first semester of studies (by January 31st for students entering in the fall semester and by June 30th for students entering in the spring semester) Subsequently, Each graduate student will meet each semester prior to December 15th or April 15th with her/his M.A. Advisory Committee for the purpose of reviewing the student’s progress toward a degree during the previous academic year. Earlier committee meetings may be held at the request of the student or the committee chair.

- **Pass:** The graduate student is making satisfactory research progress commensurate with their time in the program, has maintained at least a 3.0 cumulative GPA, and has met other requirements of the program (e.g., formed a committee, presented a research proposal, etc.) in a timely manner.
- **Probationary Pass:** The graduate student has fallen behind schedule with respect to such requirements as formation of a committee, literature search and submission of a research proposal, scheduling and taking required examinations (for PhD students only), writing of the thesis or dissertation etc. (see degree timeline), or little or no research progress has been made since the last annual review. It may apply to a student receiving a grade lower than a B in a course during the previous year even though the (overall cumulative) GPA is 3.0 or higher. Committees awarding a Probationary Pass for students who have fallen behind schedule must provide a written rationale to the Graduate Committee and the Department Chair in the annual committee report, including clearly defined milestones or benchmarks the student must reach in order to bring their performance up to standard. The student must submit a remediation plan to their committee members addressing the concerns of the committee,

including procedures for how milestones and benchmarks will be met, as well as a timeline, within two weeks of notification of their Probationary Pass. This plan must be signed by the major advisor and two other members of the student's advisory committee, and presented for approval to the Graduate Program Director. Once approved, the remediation plan document will be placed in the student's file, and a copy given to the student. Furthermore, the graduate student must have a follow-up committee meeting within six months of the annual review to evaluate their progress on the remediation plan. At the conclusion of the six-month follow-up meeting, the student will be awarded either a Pass or a Fail.

- **Fail:** The graduate student's progress is unacceptable for reasons such as a cumulative GPA of less than 3.0 in all (both graduate and undergraduate) courses attempted, insufficient research progress, or not completing the degree within time limits without an acceptable/approved reason.

Graduate students receiving a ranking of Fail for any annual review, or two rankings of Conditional Pass for any two annual reviews, will be dismissed from the Biological Sciences Graduate Program.

Appeal of a dismissal decision. If a decision was made to dismiss the student from the program, the student may make a formal appeal. This should be done according to the University of Alabama's University-wide Academic Grievance Procedures, described in the faculty handbook and available online at <https://facultyhandbook.ua.edu/>.

Additional Academic Requirements

All graduate students are required to register for and attend the weekly departmental seminar, enrolling in BSC 601 Biological Sciences Seminar each semester they are in residence at the Tuscaloosa campus.

Academic Misconduct Information

See information on academic misconduct.

Withdrawals and Leave of Absence Information

See information on withdrawals and leave of absence in the handbook.

Academic Grievances Information

See information on academic grievances.

Grades and Academic Standing

See information on grades and academic standing.

Graduate School Deadlines Information

See information on Graduate School deadlines.

Application for Graduation Information

See information on application for graduation.