

BIOLOGY (MASTER OF SCIENCE)

Students accepted to the MS with a major in Biology must decide on a track, either Non-Thesis or Thesis. Students must meet with the biology graduate program coordinator to discuss degree benchmarks and determine a track of study prior to admission into the program. An advisory committee will be selected to assist the student in developing a degree plan that satisfies university and departmental degree requirements. Requirements and benchmarks for Non-Thesis and Thesis tracks are available on the JSU Biology Department website (<http://www.jsu.edu/biology/>) and in the Biology Department office.

Application Deadlines

Deadline dates for applications and receipt of all application materials required:

Date	Event
July 1	Fall Admission
November 1	Spring Admission
April 1	Summer Admission

Any exceptions to these deadlines must be granted by the graduate program chair.

Application Materials Required for the MS with a Major in Biology

All applicants for the MS with a major in Biology must submit the following documentation to Graduate Admissions to be considered for admission:

Graduate Admissions
Jacksonville State University
700 Pelham Road North
Jacksonville, Alabama 36265-1602

1. Completed JSU Graduate Application for Admission (<https://gr-recruiter.jsu.edu/Apply/Account/Login/>).
2. Non-refundable \$35.00 application processing fee.
3. Official transcripts from the baccalaureate degree awarding institution and **all** transcripts from institutions where post-baccalaureate work has been completed. To be considered for admission, applicants must hold a degree from an institutionally accredited institution or its foreign equivalent. (Students who have previously attended JSU do not need to request a transcript from the university.)
4. A brief (1-2 page) essay that conveys information about your motivations for attending graduate school, what you hope to achieve in your area of biological interest, and your aspirations following the receipt of a graduate degree.
5. Three Graduate Reference Forms completed by individuals who can provide qualitative assessment of the applicant's potential for success in graduate coursework. Reference forms will be submitted electronically. Instructions for submission will be sent through email to the applicant upon submission of the online graduate application.
6. International student applicants must see the International Student Applicants (<https://catalog.jsu.edu/graduate/admission/>

international-student-applicants/) section of this catalog for other application and enrollment requirements.

Admission Requirements for the MS with a Major in Biology

Applicants to the MS with a major in Biology must meet both the Graduate School requirements and Biology Department requirements.

Applicants to the MS with a major in Biology must have an undergraduate major in biology or its equivalent, as determined by the Biology Department, including courses equivalent to all of the following:

- BY 101 Introductory Biology I (3)
- BY 103 Introductory Biology Lab I (1)
- BY 102 Introductory Biology II (3)
- BY 104 Introductory Biology Lab II (1)
- BY 322 Genetics (WI) (4)
- BY 332 Ecology (4)
- BY 373 Cell Biology (4).

Applicants with majors in other natural sciences or mathematics will be considered for admission; however, additional courses may be required. The following or their equivalent are suggested.

- MS 113 Precalculus Trigonometry (3)
- CY 105 General Chemistry I (3)
- CY 107 General Chemistry Laboratory I (1)
- CY 106 General Chemistry II (3)
- CY 108 General Chemistry Laboratory II (1)
- PHS 201 College Physics I (3)
- PHS 203 College Physics Laboratory Techniques I (1)
- PHS 202 College Physics II (3)
- PHS 204 College Physics Laboratory Techniques II (1)

Unconditional Admission

To obtain unconditional admission into the MS program with a major in Biology, applicants must meet the following requirement:

- A minimum overall undergraduate GPA of 2.50 including a minimum GPA of 3.00 in the major.
- No course deficiencies as determined by the Admission Requirements for the MS with a Major in Biology.

Conditional Admission

Any applicant failing to meet the requirements for unconditional admission may be conditionally admitted with the recommendation of a graduate faculty sponsor(s) and approved by the graduate program committee or the department chair.

Applicants who are granted conditional admission must meet immediately with Dr. Lori Hensley, the Biology Department Head, to discuss program benchmarks and timelines. The student must also achieve a GPA of at least 3.00 on the first 12 graduate hours attempted. Failure to meet these conditions will result in the student being dropped from graduate studies.

Minimum Requirements for the MS with a Major in Biology

An overall 3.00 GPA is required on all coursework attempted for the master's degree. Transfer credit cannot be used to raise the GPA to the required 3.00.

Non-Thesis Option

A minimum of 36 graduate semester hours (20 must be at the 500 level), including successful completion of an acceptable original research paper. The 36 graduate semester hours for the non-thesis option will include the following courses:

Course	Title	Credits
Select twelve semester hours of 3-credit-hour 500-level Biology courses in which a letter grade is earned		12
Select four semester hours from the following 500-level Biology seminar courses		4
BY 570	Seminar in Developmental Biology	
BY 571	Seminar in Organismal Biology	
BY 572	Seminar in Ecology	
BY 573	Seminar in Cell Biology	
BY 574	Seminar in Evolutionary Biology	
BY 575	Seminar in Genetics	
BY 576	Seminar in Physiology	
BY 577	Seminar in Systematics	
Required Research Project Course		
BY 595	Research Project	3
Required First Semester Seminar		
BY 501	Graduate Student Success	1
Select sixteen semester hours of committee approved electives		16
Total Hours		36

36 Graduate Semester Hours Required for this Degree.

Thesis Option

Space is limited for the thesis option of the program; therefore, students interested in the thesis option should contact the MS Program Coordinator to inquire about applying for the thesis option after being accepted to the Master of Science in biology program. Additionally, students should visit the Biology Faculty and Staff website at www.jsu.edu/biology/direct.html (<http://www.jsu.edu/biology/direct.html>) to learn more about ongoing research and inform their interests.

A minimum of 30 graduate semester hours (17 hours must be at the 500 level), including successful completion of an acceptable thesis and a comprehensive examination. The 30 graduate semester hours for the thesis option will include the following courses:

Course	Title	Credits
Select six semester hours of 3-credit-hour 500-level Biology courses in which a letter grade is earned		6
Select four semester hours from the following 500-level Biology seminar courses		4
BY 570	Seminar in Developmental Biology	
BY 571	Seminar in Organismal Biology	
BY 572	Seminar in Ecology	

BY 573	Seminar in Cell Biology	
BY 574	Seminar in Evolutionary Biology	
BY 575	Seminar in Genetics	
BY 576	Seminar in Physiology	
BY 577	Seminar in Systematics	
Thesis I and II		6
BY 599	Thesis	
Required Biometrics or Applied Statistical Methods Course		
BY 415	Biometrics	3
or MS 504	Applied Statistical Methods	
Required First Semester Seminar		
BY 501	Graduate Student Success	1
Select ten semester hours of committee approved electives		10
Total Hours		30

30 Graduate Semester Hours Required for this Degree.

The thesis option also includes completion of a committee-directed research project. A typical research project is completed in less than three years and includes the following timeline benchmarks:

- **Year One:** Assignment of a major advisor and thesis committee, develop a research proposal (includes completion of the first BY 599 Thesis (3), meet with thesis committee.

Thesis students should contact the Graduate School to receive an orientation to the thesis process prior to enrolling in the first three semester hours of thesis, 599. This orientation can be completed either in person or via email. The purpose of the orientation is to provide the thesis student with information concerning required forms, due dates, and to answer any questions concerning thesis options and/or procedure. For further information concerning this orientation, please contact Ashlee Hanvey, ahanvey@jsu.edu (<https://catalog.jsu.edu/Mailto:ahanvey@jsu.edu>), 321 Angle Hall, (256) 782-5348.

- **Year Two:** Completion of research project, write thesis, provide thesis committee written thesis at least three weeks prior to thesis defense.

See Thesis Options and Procedures (<https://catalog.jsu.edu/graduate/academic-policies-procedures/thesis-options-procedures/>) in this catalog for more information.

Students not meeting benchmarks may be provided additional time as determined by their thesis committee, the department chair, or the Dean of the Graduate School. More details on thesis guidelines may be found on the JSU Biology website (http://www.jsu.edu/biology/academic_programs.html) and in the Biology Department office.

Graduation and Comprehensive Exam

No comprehensive exam is required for the Non-Thesis Option of this degree. For students choosing the Thesis Option, the thesis defense serves as the comprehensive exam. All students must apply for graduation (<http://www.jsu.edu/graduate/graduation.html>) by the given deadline of the semester (<http://www.jsu.edu/registrar/academic-calendar/>) in which they plan to graduate. Please see the Graduation and Comprehensive Exam (<https://catalog.jsu.edu/graduate/academic-policies-procedures/graduation-comprehensive-exam/>) section of this catalog for more information.