

# MASTER OF SCIENCE (MS) DEGREE IN THE FIELD OF ECOLOGY AND EVOLUTIONARY BIOLOGY

## Program Learning Outcomes for the MS Degree in the field of Ecology and Evolutionary Biology

Upon completing the MS degree in the field of Ecology and Evolutionary Biology, students will be able to:

1. Demonstrate an ability to understand and critically evaluate concepts, research accomplishments, and techniques in ecology and evolutionary biology.
2. Demonstrate independent problem solving and critical thinking skills by identifying novel research questions in ecology and evolutionary biology and synthesizing critical paths towards answering them.
3. Demonstrate technical proficiency in a range of ecology and evolutionary biology research methods.
4. Demonstrate the effective written communication skills required for scientific publications, grant proposal submissions, and a thesis describing independent research.
5. Demonstrate the effective oral and visual communication skills necessary for articulating scientific findings and significance to diverse audiences.

## Requirements for the MS Degree in the field of Ecology and Evolutionary Biology

### Course Requirements

The MS degree is a thesis master's degree. For general university requirements, please see [Thesis Master's Degrees \(https://ga.rice.edu/graduate-students/academic-policies-procedures/regulations-procedures-thesis-masters-degrees/\)](https://ga.rice.edu/graduate-students/academic-policies-procedures/regulations-procedures-thesis-masters-degrees/). For additional requirements, regulations, and procedures for all graduate programs, please see [All Graduate Students \(https://ga.rice.edu/graduate-students/academic-policies-procedures/regulations-procedures-all-degrees/\)](https://ga.rice.edu/graduate-students/academic-policies-procedures/regulations-procedures-all-degrees/). Most of the formal course studies will be completed in the first year of residence to allow the students to begin thesis research at the end of their second semester at Rice. Entering students will meet with their faculty advisor to form a course of study of the first year. Students should have completed coursework in ecology, evolution (or equivalent), mathematics (including calculus), and statistics prior to admission. Deficiencies in these subject areas should be made up during the first year of residence; some may be waived at the discretion of the EEB Graduate Advising Committee and the EEB Graduate Program Director.

The following Rice courses must be taken if students lack coursework in *ecology* or *evolution* in their final undergraduate transcript:

Code	Title	Credit Hours
BIOS 332	ECOLOGY	3
BIOS 334	EVOLUTION	3

## Summary

Code	Title	Credit Hours
Total Credit Hours Required for the MS Degree in the field of Ecology and Evolutionary Biology		30

## Degree Requirements

Code	Title	Credit Hours
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### Core Requirements

BIOS 569	CORE COURSE IN ECOLOGY AND EVOLUTIONARY BIOLOGY	3
BIOS 584	GRADUATE SEMINAR IN ECOLOGY AND EVOLUTIONARY BIOLOGY (required in all years of residency, fall semester)	1 credit hour per year
BIOS 586	GRADUATE SEMINAR IN ECOLOGY AND EVOLUTIONARY BIOLOGY (required in all years of residency, spring semester)	1 credit hour per year
BIOS 591	GRADUATE TEACHING IN ECOLOGY AND EVOLUTIONARY BIOLOGY (two semesters) <sup>1</sup>	3 credit hours per semester
BIOS 801	ECOLOGY & EVOLUTIONARY BIOLOGY GRADUATE RESEARCH <sup>2</sup>	1-15

Select a minimum of 2 courses from the following (2 semesters of any combination of BIOS "Topics" courses):<sup>3</sup> 2 credit hours or more

BIOS 561	TOPICS IN EVOLUTION (FALL)
BIOS 562	TOPICS IN EVOLUTION (SPRING)
BIOS 563	TOPICS IN ECOLOGY (FALL)
BIOS 568	TOPICS IN ECOLOGY (SPRING)

### Thesis Requirement

Completion and public defense of a thesis embodying the results of an original investigation

### Additional Coursework as Approved by Department

Total Credit Hours	Minimum of 30
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## Footnotes and Additional Information

<sup>1</sup> Students must complete 2 semesters of BIOS 591 during their first 4 semesters to gain teaching experience; additional teaching experiences are available on an optional basis.

<sup>2</sup> A minimum of 10 credit hours of BIOS 801 *Ecology & Evolutionary Biology Graduate Research* is required for a master's degree. BIOS 801 credit hours vary per student, depending on the number of other courses the student is taking in a given semester.

<sup>3</sup> At least 2 topics courses must be completed before candidacy. Students are strongly encouraged to take at least 1 topics course per semester during all years of residency.

## Evaluation of Progress in Graduate Study

Students must maintain a minimum grade average of B (3.00 grade points) in courses taken in the department and satisfactory grades in courses taken outside the department. Students must demonstrate satisfactory progress in their degree program in annual reviews by the EEB faculty. The review process requires that each student:

- Presents a public seminar on their research at the annual EEB Graduate Student Symposium
- Prepares a written report on their progress

First-year students must also participate in a meeting with the EEB Graduate Advising Committee.

### **MS Degree Program**

In addition to the general university requirements and those listed above, the MS degree in Ecology and Evolutionary Biology requires:

- Convening a master's thesis committee. A thesis committee is composed of at least three members. Two, including the committee chair, must be members of the student's department faculty.
- Completing an original investigation and a master's thesis.
- Presenting a departmental seminar on the research.
- Publicly defending the master's thesis.

## **Policies for the MS Degree in the field of Ecology and Evolutionary Biology**

### **Ecology and Evolutionary Graduate Program Handbook**

The General Announcements (GA) is the official Rice curriculum. As an additional resource for students, Ecology and Evolutionary Biology publishes a graduate program handbook, which can be found here: [https://gradhandbooks.rice.edu/2021\\_22/Ecology\\_Evolutionary\\_Biology\\_Graduate\\_Handbook.pdf](https://gradhandbooks.rice.edu/2021_22/Ecology_Evolutionary_Biology_Graduate_Handbook.pdf)

### **Admission**

Applicants for graduate study in the Ecology and Evolutionary Biology Program must have:

- BA or BS degree or equivalent that provides a strong background in biology
- Strong ability and motivation, as indicated by academic record, Graduate Record Examination (GRE) scores, and recommendations
- Scores from the GRE biology subject exam are optional but can be helpful, particularly for students with nontraditional backgrounds in biology

These requirements do not preclude admission of qualified applicants who have majored in areas other than biology. Although the program offers MS degrees, only on rare occasions are students who do not intend to pursue the PhD admitted to the graduate program. For general university requirements, see [Graduate Degrees \(https://ga.rice.edu/graduate-students/academic-opportunities/degrees/\)](https://ga.rice.edu/graduate-students/academic-opportunities/degrees/).

### **Transfer Credit**

For Rice University's policy regarding transfer credit, see [Transfer Credit \(https://ga.rice.edu/graduate-students/academic-policies-procedures/regulations-procedures-all-degrees/#transfer\)](https://ga.rice.edu/graduate-students/academic-policies-procedures/regulations-procedures-all-degrees/#transfer). Some departments and programs have additional restrictions on transfer credit. Students are encouraged to meet with their academic program's advisor when considering transfer credit possibilities.

### **Departmental Transfer Credit Guidelines**

Students pursuing the MS degree in the field of Ecology and Evolutionary Biology should be aware of the following departmental transfer credit guidelines:

- Requests for transfer credit will be considered by the program director on an individual case-by-case basis.

### **Additional Information**

For additional information, please see the BioSciences website: <https://biosciences.rice.edu/>

## **Opportunities for the MS Degree in the field of Ecology and Evolutionary Biology**

All full-time Ecology and Evolutionary Biology graduate students receive funding and full tuition waivers as specified in their offer letters. Information about Student Resources, Attendance at Scientific Conferences, Internships, Graduate Students Awards, the Graduate Student Association, etc. can be found in the Ecology and Evolutionary Biology Graduate Program handbook here:

[http://gradhandbooks.rice.edu/2018\\_19/Ecology\\_Evolutionary\\_Biology\\_Graduate\\_Handbook.pdf](http://gradhandbooks.rice.edu/2018_19/Ecology_Evolutionary_Biology_Graduate_Handbook.pdf)

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