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/). 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/). 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 for 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:

- **EBIO 325** ECOLOGY 3 credit hours
- **EBIO 334 / BIOC 334** EVOLUTION 3 credit hours

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>EBIO 325</td>
<td>ECOLOGY</td>
<td>3</td>
</tr>
<tr>
<td>EBIO 334</td>
<td>EVOLUTION</td>
<td>3</td>
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</table>

Summary

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td></td>
<td>Total Credit Hours Required for the MS Degree in</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>the field of Ecology and Evolutionary Biology</td>
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Degree Requirements

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<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
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<tr>
<td></td>
<td>Core Requirements</td>
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<tr>
<td>EBIO 569</td>
<td>CORE COURSE IN ECOLOGY AND EVOLUTIONARY BIOLOGY</td>
<td>3 credit hours or more</td>
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Select a minimum of 2 courses from the following (2 semesters of any combination of EBIO 'Topics' courses): 1

- **EBIO 561** TOPICS IN EVOLUTION
- **EBIO 562** TOPICS IN BEHAVIORAL BIOLOGY
- **EBIO 563** TOPICS IN ECOLOGY
- **EBIO 568** TOPICS IN BIOLOGICAL DIVERSITY

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<tr>
<th>Code</th>
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<tr>
<td>EBIO 585</td>
<td>GRADUATE SEMINAR IN ECOLOGY AND EVOLUTIONARY BIOLOGY (required in all years of residency, fall semester)</td>
<td>1 credit hour per year</td>
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<tr>
<td>EBIO 586</td>
<td>GRADUATE SEMINAR/ECOLOGY AND EVOLUTIONARY BIOLOGY (required in all years of residency, spring semester)</td>
<td>1 credit hour per year</td>
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<tr>
<td>EBIO 591</td>
<td>GRADUATE TEACHING IN ECOLOGY AND EVOLUTIONARY BIOLOGY (two semesters)</td>
<td>3 credit hours per semester</td>
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<tr>
<td>EBIO 801</td>
<td>EEB GRADUATE RESEARCH</td>
<td>Variable credit hours</td>
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Thesis Requirement

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

Additional Coursework as Approved by Department

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<th>Code</th>
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<th>Credit Hours</th>
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<tr>
<td></td>
<td>Total Credit Hours Minimum of 30</td>
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Footnotes and Additional Information

1. 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.
2. Students must complete 2 semesters of EBIO 591 during their first 4 semesters to gain teaching experience; additional teaching experiences are available on an optional basis.
3. A minimum of 10 credit hours of EBIO 801 EEB Graduate Research is required for a master's degree. EBIO 801 credit hours vary per student, depending on the number of other courses the student is taking in a given semester.
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/2019_20/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://qa.rice.edu/graduate-students/academic-opportunities/degrees/).

Transfer Credit
For Rice University's policy regarding transfer credit, see Transfer Credit (https://qa.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.

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