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 evolutional 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 residency 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 residency; 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:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>BIOS 332</td>
<td>ECOLOGY</td>
<td>3</td>
</tr>
<tr>
<td>BIOS 334</td>
<td>EVOLUTION</td>
<td>3</td>
</tr>
</tbody>
</table>

Summary

<table>
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<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 the field of Ecology and Evolutionary Biology</td>
<td>30</td>
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Degree Requirements

Core Requirements

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<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
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<tr>
<td>BIOS 569</td>
<td>CORE COURSE IN ECOLOGY AND EVOLUTIONARY BIOLOGY</td>
<td>3</td>
</tr>
<tr>
<td>BIOS 584</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>BIOS 586</td>
<td>GRADUATE SEMINAR IN ECOLOGY AND EVOLUTIONARY BIOLOGY (required in all years of residency, spring semester)</td>
<td>1 credit hour per year</td>
</tr>
<tr>
<td>BIOS 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>BIOS 801</td>
<td>ECOLOGY &amp; EVOLUTIONARY BIOLOGY GRADUATE RESEARCH</td>
<td>1-15</td>
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Select a minimum of 2 courses from the following (2 semesters of any combination of BIOS "topics" courses): 2 credit hours or more

- BIOS 561 TOPICS IN EVOLUTION
- BIOS 562 TOPICS IN EVOLUTION (SPRING)
- BIOS 563 TOPICS IN ECOLOGY
- 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

Footnotes and Additional Information

1. 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.
2. 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.
3. 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.

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 Student Awards, the Graduate Student Association, etc. can be found in the Ecology and Evolutionary Biology Graduate Program handbook here:

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