

DOCTOR OF PHILOSOPHY (PHD) DEGREE IN THE FIELD OF ECOLOGY AND EVOLUTIONARY BIOLOGY

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

Upon completing the PhD 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 PhD Degree in the field of Ecology and Evolutionary Biology

For general university requirements, please see [Doctoral Degrees \(https://ga.rice.edu/graduate-students/academic-policies-procedures/regulations-procedures-doctoral-degrees/\)](https://ga.rice.edu/graduate-students/academic-policies-procedures/regulations-procedures-doctoral-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/). Students pursuing the PhD Degree in the field of Ecology and Evolutionary Biology must complete the requirements as listed below.

Course Requirements

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 requirements listed in the General Announcements (GA) satisfy the minimum requirements for this degree program. In certain instances, courses (or requirements) not officially listed here may be substituted upon approval of the program's academic advisor, or where applicable, the department or program's Director of Graduate Studies. Course substitutions or any exceptions to the stated official

curricular requirements must be approved by the [Office of Graduate and Postdoctoral Studies \(https://graduate.rice.edu/\)](https://graduate.rice.edu/). Students and their academic advisors should identify and clearly document the courses to be taken.

Summary

Code	Title	Credit Hours
Total Credit Hours Required for the PhD Degree in the field of Ecology and Evolutionary Biology		90

Degree Requirements

Code	Title	Credit Hours
Core Requirements		
BIOS 532	ECOLOGY	3
BIOS 534	EVOLUTION	3
BIOS 569	CORE COURSE IN ECOLOGY AND EVOLUTIONARY BIOLOGY	1
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 589	EEB OUTREACH DEVELOPMENT	1
BIOS 591	GRADUATE TEACHING IN ECOLOGY AND EVOLUTIONARY BIOLOGY (two semesters)	3 credit hours per semester
BIOS 801	ECOLOGY & EVOLUTIONARY BIOLOGY GRADUATE RESEARCH ²	1-15
Select 2 courses from the following (2 semesters of any combination of BIOS "Topics" courses): ³		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 90
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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 BIOS 801 *Ecology & Evolutionary Biology Graduate Research* credit hours vary depending on the number of other courses the student is taking in a given semester.
- ³ At least two topics courses must be completed before candidacy. Students are strongly encouraged to take at least one 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.

PhD Degree Program

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

- Passing the qualifying examination given by the thesis committee. (The committee will be composed of at least three members. Two, including the committee chair, must be members of the student's department faculty; in doctoral thesis committees one member must have their primary appointment in another department within the university.)
- Completing an original investigation and a doctoral thesis with at least three chapters with the potential to produce publications in reputable, peer-reviewed scientific journals.
- Presenting a departmental seminar on the research.
- Publicly defending the doctoral thesis.

Policies for the PhD 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/2023_24/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 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 \(https://ga.rice.edu/graduate-students/academic-policies-procedures/\)](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 PhD 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 PhD 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 online at the department website: http://gradhandbooks.rice.edu/2018_19/Ecology_Evolutionary_Biology_Graduate_Handbook.pdf

Additional Information

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