

## About the Program

The George Washington University Department of Biological Sciences explores the science of life from biomolecules to ecosystems. Located in the heart of Washington, D.C., the department thrives among one of the highest concentrations of life scientists in the world and provides students with unparalleled access to research opportunities.

## Program Highlights

**Connected.** Students benefit from a century-long partnership with the Smithsonian's National Museum of Natural History and collaborations with leading researchers at the National Institutes of Health, the Food and Drug Administration, the Organization for Tropical Studies and others. The department also works closely with on-campus partners, including the GW Institute for Biomedical Sciences and the GW Computational Biology Institute.

**Innovative.** GW's state-of-the-art Science and Engineering Hall brings together students and faculty in a setting designed to foster innovative, interdisciplinary cooperation across the sciences.

**Customizable.** With support from faculty research advisors, students have the opportunity to choose coursework and research projects tailored to their interests.

## Research Areas

Graduate students choose from two areas of study:

- **Cellular and Molecular Biology:** Students conduct research on a wide range of topics, including immunology, neurobiology and developmental and cellular biology. Research projects involve well-studied model systems, non-model organisms and comparisons among different types of organisms.
- **Systematics, Evolution and Ecology (SEE):** GW graduate students are at the forefront of biodiversity and ecosystem studies, utilizing comparative and experimental approaches to studying phylogenetics, species interactions, morphology, global change, and behavioral and functional ecology. Fieldwork expeditions span the globe from the South Pacific to West Africa.

## Master of Science (M.S.) in Biological Sciences

The M.S. is a 36-credit hour program taken either full- or part-time.

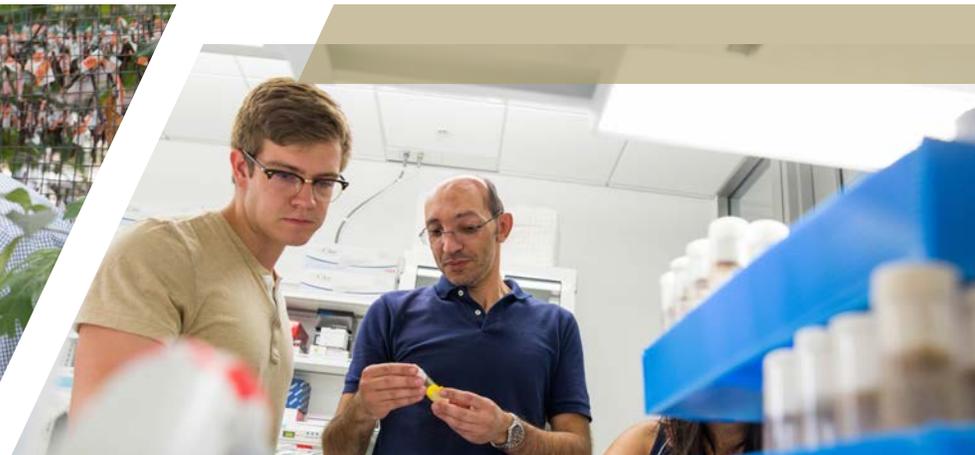
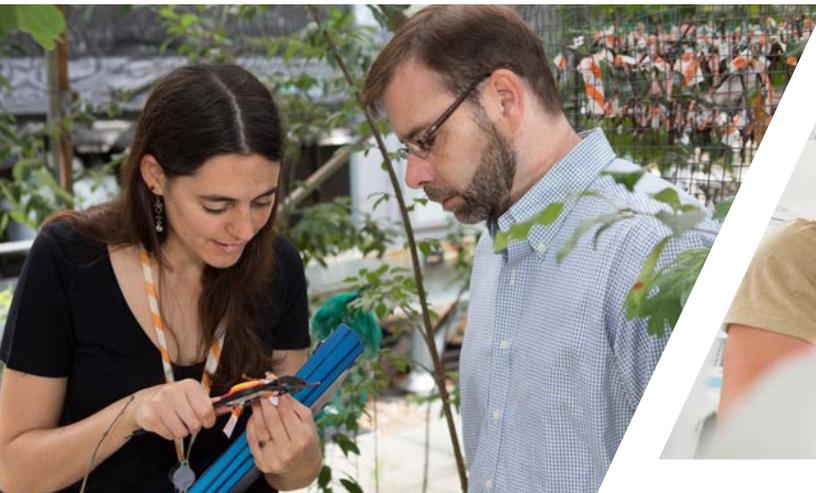
- 24 credit hours of coursework
- Thesis (six credits) based on original research
- Satisfactory completion of a final comprehensive examination

While a non-thesis option is available, students are encouraged to pursue the thesis option.

## Doctor of Philosophy (Ph.D.) in Biological Sciences

The 72-credit hour doctoral program is designed by the student in consultation with an advisory committee and includes six to 24 credit hours of dissertation research. A previously earned Master of Science may serve as 30 of the 72 required credit hours.

Doctoral coursework is designed to prepare students for general examinations in three or more fields relevant to the major area of interest. Following these exams, students undertake dissertation research under the guidance of a dissertation director. The final examination is an oral defense of the dissertation.



## Faculty

**Jim Clark**

Dinosaur paleobiology and field collection

**Hartmut Doebel**

Pesticide-mediated effects of honeybee biology

**Ioannis Eleftherianos**

Infection and innate immunity

**Catherine Forster**

Ornithischian dinosaurs

**Keryn Gedan**

Tidal wetland ecology and global change

**Leon Grayfer**

Amphibian immune cell development and functionality

**Patricia Hernandez**

Vertebrate functional morphology and evo devo

**Gustavo Hormiga**

Systematics and evolution of arachnids

**Aleksandar Jeremic**

Protein trafficking and toxicity

**Sandy Kawano**

Comparative biomechanics and physiology

**John Lill**

Ecology of plant-insect interactions

**Mollie Manier**

Evolution and genetics of sperm competition

**Arnaud Martin**

Butterfly wing evo-devo

**Damien O'Halloran**

Genetics of sensory behavior

**Guillermo Orti**

Fish evolution and phylogenomics

**Scott Powell**

Ecology of trait evolution in ants

**Alex Pyron**

Amphibian and reptile biogeography

**Jimmy Saw**

Microbial diversity, ecology, and evolution

**Tara Scully**

Oyster development, restoration

**Adam Smith**

Animal behavior, social evolution, bees

**L. Courtney Smith**

Innate immunity in invertebrates

**Richard Tollo**

Petrology of Precambrian orogens; volcanology

**Amy Zanne**

Plant & fungal ecology & macroevolution; C cycling

## The Robert Weintraub Program in Systematics and Evolution

The Robert Weintraub Program in Systematics and Evolution is a subsection of the Department of Biological Sciences that offers Master of Science and Doctor of Philosophy degrees in biology. In collaboration with the Smithsonian's National Museum of Natural History, the Weintraub Program boasts top scholars in the field and receives endowment support for research and field work.

### Application Requirements

- Undergraduate degree in an appropriate field from an accredited college or university
- GRE General Test (waived for applicants who hold a J.D., M.D. or Ph.D.)
- One letter of recommendation for MS applicants, or three letters of recommendation for Ph.D. applicants
- Statement of Purpose (a 250-500 word statement discussing research interests and potential research advisors within the department)
- Transcripts

Applicants must also establish correspondence with one or more potential research advisors in the Department of Biological Sciences before applying. The application deadline for the fall semester is Dec. 1 for the Ph.D. program and Jan. 15 for the M.S. program.

### Financial Support

Prospective students apply for financial assistance when submitting their application for admission. The department offers several funding opportunities including, but not limited to:

- **Harlan Trust Scholarship:** A merit-based scholarship supported by the Wilber V. (Bill) Harlan Scholarship Trust that includes a research stipend and tuition assistance for doctoral students.
- **Ronald Barbour Weintraub Research Fellowship:** A stipend and tuition award for biological sciences doctoral degree candidates.
- **Isabella Osborn King Research Fellowship:** A stipend for biological sciences doctoral candidates.
- **Dean's Award:** A tuition award for master's students.

### Learn More

Website: [GO.GWU.EDU/GRADBIOLOGY](http://GO.GWU.EDU/GRADBIOLOGY)

Email: [biology@gwu.edu](mailto:biology@gwu.edu)

Phone: 202-994-6090

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*The George Washington University does not unlawfully discriminate in its admissions programs against any person on any basis prohibited by law, including without limitation, race, color, religion, sex, national origin, age, disability, veteran status, sexual orientation, gender identity or expression, genetic information, pregnancy, or familial or marital status.*