

# ZOOLOGY

## Program Information

*Chair:* Marta L. Wayne

*Graduate Coordinator:* John (Gordon) Burleigh

The Department of Biology offers graduate programs in Zoology leading to the Master of Science in Teaching, Master of Science, and Doctor of Philosophy degrees. The requirements for these degrees can be found in the Graduate Degrees (<http://gradcatalog.ufl.edu/graduate/degrees/>) section of this catalog.

Our program emphasizes Integrative Biology, with integration accomplished through a focus on the theoretical foundations provided by evolutionary biology and ecology. Our faculty has expertise in ecology, evolution, behavior, comparative and environmental physiology, genetics, development, and phylogenetics. We work in a variety of terrestrial and aquatic environments and geographic regions (tropics through subpolar), and on a range of organisms (including plants). Our faculty value integrative research (e.g., by crossing levels of organization from gene expressions to species interactions), linking theory with data (through use of statistical and mathematical tools), and using natural history to guide the development and testing of rigorous conceptual frameworks. Many of our faculty also are interested in applying and testing basic science in applied contexts (e.g., conservation biology and ecotoxicology).

Our approach is highlighted through our first-year, required, graduate course, Integrative Principles. Each student's supervisory committee will recommend additional courses according to the academic background and research plans of the student.

### Degrees Offered

#### Degrees Offered with a Major in Zoology

- Doctor of Philosophy
  - without a concentration
  - concentration in Animal Molecular and Cellular Biology
  - concentration in Tropical Conservation and Development
  - concentration in Wetland Sciences
- Master of Science
  - without a concentration
  - concentration in Tropical Conservation and Development
  - concentration in Wetland Sciences
- Master of Science in Teaching
  - without a concentration
  - concentration in Tropical Conservation and Development
  - concentration in Wetland Sciences

Requirements for these degrees are given in the Graduate Degrees (<http://gradcatalog.ufl.edu/graduate/degrees/>) section of this catalog.

### Courses

#### Zoology Courses

Code	Title	Credits
BOT 6726C	Principles of Systematic Biology	4
BSC 6038	Broader Impacts of Science on Society	2
PCB 5307C	Limnology	4

PCB 5415C	Behavioral Ecology	4
PCB 5615	Molecular Evolution and Systematics	4
PCB 6049	Seminar in Ecology	1-3
PCB 6377C	Physiological Ecology of Vertebrates	4
PCB 6447C	Community Ecology	4
PCB 6675C	Evolutionary Biogeography	3
PCB 6685	Population Genetics	4
PCB 6695	Seminar in Evolutionary Biology	1
ZOO 5115C	Vertebrate Paleontology	3
ZOO 5486C	Mammalogy	4
ZOO 6005	Integrative Principles of Zoology I	4
ZOO 6308	Dynamic Optimization Modeling in Behavioral and Evolutionary Ecology	3
ZOO 6406	Biology of Sea Turtles	3
ZOO 6456C	Ichthyology	4
ZOO 6542	Nutritional Ecology	3
ZOO 6905	Individual Studies	1-8
ZOO 6910	Supervised Research	1-5
ZOO 6920	Zoology Colloquium	1
ZOO 6927	Special Topics in Zoology	1-4
ZOO 6930	Seminar in Molecular Evolution	2
ZOO 6931	Seminar in Marine Turtle Biology	1-2
ZOO 6939	Seminar in Animal Behavior	1-3
ZOO 6971	Research for Master's Thesis	1-15
ZOO 7979	Advanced Research	1-12
ZOO 7980	Research for Doctoral Dissertation	1-15

## Biology Departmental Courses

Code	Title	Credits
BOT 6276C	Phylogenomics	4
BOT 6656	Plant Symbiosis	3
BSC 6038	Broader Impacts of Science on Society	2
BSC 6451	Computational Tools for Research in Biology	3
BSC 6895	AI in Biology	3
PCB 6675C	Evolutionary Biogeography	3
PCB 6685	Population Genetics	4
ZOO 6930	Seminar in Molecular Evolution	2

### Student Learning Outcomes

#### zoology (PHD)

##### SLO 1 Knowledge

Students will identify, define, and describe basic fundamentals of biology and a thorough understanding of the fundamentals of zoology

##### SLO 2 Skills

Students will design a research project, collect data, analyze and interpret the results. They will be able to present the results of original research in oral and written form

##### SLO 3 Skills

Students design a research project, collect data, analyze and interpret the results. They will be able to present the results of original research in oral and written form

##### SLO 4 Professional Behavior

Students will demonstrate ethical behaviors, professional conduct

##### SLO 5 Professional Behavior

Students will be able to interact and communicate with professionals at scientific conferences

## **Zoology (MS)**

SLO 1 Knowledge

Students will identify, define, and describe the basic fundamentals of biology and zoology

SLO 2 Skills

Students will design a research project, collect data, analyze and interpret the results and present this in written and oral form

SLO 3 Professional Behavior

Students will practice ethical behaviors and professional conduct

SLO 4 Professional Behavior

Students will interact and communicate with professionals at scientific conferences

## **Zoology (MST)**

SLO 1 Knowledge

Students will identify, define, and describe the basic fundamentals of zoology

SLO 2 Skills

Students will define, explain and communicate key concepts in zoology and biology

SLO 3 Professional Behavior

Students will engage in ethical behaviors and professional conduct

SLO 4 Professional Behavior

Students will practice ethical behaviors and professional conduct