EVOLUTIONARY BIOLOGY, BA

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Degree: Bachelor of Arts (BA) Major: Evolutionary Biology

Program Overview

The Evolutionary Biology Program is designed to provide students with knowledge of macro- and micro-evolutionary processes underlying the evolution and diversification of life on Earth and an understanding of the meta-scientific issues involved in this unique field of study.

The program includes grounding in the history and philosophy of evolutionary thought and alternative conceptualizations of the mechanisms, patterns, and processes of evolution. It emphasizes evolutionary theory, foundations of ecology and genetics, focused study of particular organisms or groups of organisms, and the dynamics of evolutionary principles in scientific inquiry.

Undergraduate Policies

For undergraduate policies and procedures, please review the Undergraduate Academics section of the General Bulletin.

Accelerated Master's Programs

Undergraduate students may participate in accelerated programs toward graduate or professional degrees. For more information and details of the policies and procedures related to accelerated studies, please visit the Undergraduate Academics section of the General Bulletin.

Program Faculty

Michael Benard, PhD Associate Professor and Chair, Department of Biology

Radhika Atit, PhD Professor, Department of Biology

Darin Croft, PhD Professor, Department of Anatomy, School of Medicine

Emmitt Jolly, PhD Professor, Department of Biology

Scott Simpson, PhD Professor, Department of Anatomy, School of Medicine

Mark Willis, PhD Professor, Department of Biology

Peter A. Zimmerman, PhD Professor, Center for Global Health and Diseases, School of Medicine

Program Requirements

This program is available only as a second major for a BA degree; as a secondary major for a student completing a BS degree; or as the sole

major for a BA degree if a student is also completing a BS degree. All students must meet the general requirements for bachelor's degrees and the Unified General Education Requirements.

Evolutionary biology is a second major, to be pursued in conjunction with a conventional disciplinary major. Up to 12 credit hours in required and elective courses taken by students for their first major may be applied to their evolutionary biology major.

The 30 credit hour interdisciplinary major in evolutionary biology consists of:

- a. Three foundation courses
- b. One course in ecology
- c. One course in the philosophy/history of science
- d. 15 credit hours of approved electives

The approved electives may include additional philosophy/history of science courses from the list below. In consultation with a major advisor, students will tailor intensive study to suit particular interests within the major.

Code	Title	Hours	
Required Courses: 9			
BIOL 214	Genes, Evolution and Ecology		
EEPS 210	Earth History: Time, Tectonics, Climate, and Life		
PHIL/ANTH/ BIOL/EEPS/ HSTY 225	Evolution		
Ecology Courses:		3	
Choose one of the	following:		
BIOL 216	Development and Physiology		
BIOL 336	Aquatic Biology		
BIOL 351	Principles of Ecology		
Philosophy/Histor	ry of Science Courses:	3	
Choose one of the following:			
HSTY 201	Science in Western Thought I		
HSTY 202	Science in Western Thought II		
PHIL 203	Revolutions in Science		
Elective Courses: 15			
ANTH 103	Introduction to Human Evolution		
ANTH 302	Darwinian Medicine		
BIOL 214L	Genes, Evolution and Ecology Lab		
BIOL 216L	Development and Physiology Lab		
BIOL 223	Vertebrate Biology		
BIOL 305	Herpetology		
BIOL 318	Introductory Entomology		
BIOL 326	Genetics		
BIOL 328	Plant Genomics and Proteomics		
BIOL 339	Aquatic Biology Laboratory		
BIOL 343	Microbiology		
BIOL 345	Mammal Diversity and Evolution		
BIOL 351L	Principles of Ecology Laboratory		
BIOL 358	Animal Behavior		
BIOL 362	Principles of Developmental Biology		
BIOL 364	Research Methods in Evolutionary Biology		
BIOL 365	Evo-Devo:Evolution of Body Plans and Pathologi	es	

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	ANTH/BIOL/ EEPS/PHIL 396	Undergraduate Research in Evolutionary Biology		
	ANTH/EEPS/ PHIL 367	Topics in Evolutionary Biology		
	STAT 313	Statistics for Experimenters		
	STAT 201	Basic Statistics for Social and Life Sciences		
	PSCL 350	Behavior Genetics		
	EEPS 301	Stratigraphy and Sedimentation		

Total Hours

30