

# ZOOLOGY (ZOOL)

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# Course numbers with the # symbol included (e.g. #400) have not been taught in the last 3 years.

## **ZOOL 810 - Sharks and Bony Fishes**

**Credits:** 4

Some fish swimming today are hundreds of years old, whereas others complete their life cycle in two months! This course provides an introduction to the diversity of fishes found across the globe, including elasmobranchs (sharks, skates, and rays) and teleosts (bony fishes). Particular attention will be paid to fishes local to New Hampshire and New England. Students will learn about fish anatomy, physiology, and ecology. Prereq: BIOL 411, BIOL 412, or equivalent. Lab. (Offered in alternative years.) Special Fee.

## **ZOOL 833 - Behavioral Ecology**

**Credits:** 4

Behavioral ecology is the evolution of animal behavior played out on the stage of ecology—why might a certain behavior be adaptive in a certain context? In this course, we will pursue in-depth, high-level explorations of the central topics of animal behavior, all through the lens of evolution. We will also focus heavily on improving reading, writing, and presentation skills.

## **ZOOL 836 - Genes and Behavior**

**Credits:** 4

Genes and behavior examines the genetic underpinnings of animal behavior, and how behavior evolves on a genetic level. The course primarily relies on readings from the primary literature, using examples from laboratory model organisms, animals in their natural habitats, and humans. Topics include aggressiveness, social behavior, personality, parental care, communication, mating behavior, novelty seeking behavior, and foraging. This interdisciplinary course examines these behaviors at multiple levels, including genomics, population genetics, molecular genetics, epigenetics, endocrinology, and neurobiology. Prereq: GEN 604 and ZOOL 713 or equivalent.

## **ZOOL #877 - Neuroethology: The Neural Basis of Animal Behavior**

**Credits:** 4

Students taking this course will discover how some of the most remarkable behavioral adaptations in animals can be understood by examining specialized sensory systems and neural circuits. By exploring the complex interactions between animal behavior, neural systems, evolutionary relationships, anatomy, physiology and ecology, students will be better equipped to understand the neural basis of behavior. A culminating writing project will help sharpen students' scientific writing skills, and the ability to understand the primary neuroethology literature. Prereq: BIOL 411 and BIOL 412, or permission. Physiology (ZOOL 625), or another introductory neurobiology course, also desirable.

## **ZOOL 895 - Advanced Studies**

**Credits:** 1-4

Independent study in various areas, including but not limited to: animal behavior; departmental biology; ecology; electron microscopy; evolution; genetics; histology; history of biology; invertebrate biology; neurobiology and behavior; physiology; teaching practices; underwater research; vertebrate biology; biological techniques. Course sections for advanced work, individual or group seminar. May include reading, laboratory work, organized seminars, and conferences. Prereq: permission of department chairperson and staff concerned.

## **ZOOL 899 - Master's Thesis**

**Credits:** 1-10

Prereq: permission of department chairperson and prospective supervisor. Cr/F.

**Repeat Rule:** May be repeated for a maximum of 10 credits.

## **ZOOL #997 - Seminar**

**Credits:** 1-2

Reports on recent zoological literature. Subject fields are those listed under ZOOL 895 and ZOOL 896; not all areas available every semester. Cr/F.

## **ZOOL #998 - Seminar**

**Credits:** 1-2

Reports on recent zoological literature. Subject fields are those listed under ZOOL 895 and ZOOL 896; not all areas available every semester. Cr/F.

## **ZOOL 999 - Doctoral Research**

**Credits:** 0

Cr/F.