

## ZOOLOGY (ZOO & ZOOL)

**210. Human Anatomy & Physiology Laboratory I Simulation.** Credit 1 hour. Prerequisites: Registration in or prior credit for ZOO 250, eligibility for the CALL program (RN to BSN in Nursing), and permission of the Department Head of Biological Sciences. A series of online, virtual, and science kit laboratories designed to illustrate the course material in ZOO 250, focusing on the skeletal system, the muscular system, the skin, histology, and the nervous system. Students will relate topics learned in lectures to a virtual laboratory setting using principles of anatomy and physiology to answer questions relevant to human health and disease. This course does not provide practical experience with biological specimens, chemicals, instrumentation, or laboratory safety procedures. This course is exclusively for students in the CALL nursing program and may not be used to substitute for any Biology, Microbiology, or Zoology laboratory or lecture course, nor can it be used to satisfy any prerequisites, corequisites, or requirements for any other courses. A Laboratory fee is required for this course. (Summer, Fall, Spring)

**211. Human Anatomy & Physiology Laboratory II Simulation.** Credit 1 hour. Registration in or prior credit for ZOO 251, eligibility for the CALL program (RN to BSN in Nursing), and permission of the Department Head of Biological Sciences. A series of online, virtual, and science kit laboratories designed to illustrate the course material in ZOO 251, focusing on the cardiovascular system, the respiratory system, blood, the digestive system, the urinary systems, and reproduction and development. Students will relate topics learned in lectures to a laboratory setting using principles of anatomy and physiology to answer questions relevant to human health and disease. This course does not provide practical experience with biological specimens, chemicals, instrumentation, or laboratory safety procedures. This course is exclusively for student in the CALL nursing program. In addition, this course may not be used to substitute for any Biology, Microbiology, or Zoology laboratory or lecture course, nor can it be used to satisfy any prerequisites, corequisites, or requirements for any of these courses without the consent of the Department Head of the student's major. A Laboratory fee is required for this course. (Summer, Fall, Spring)

**241. Human Physiology.** Credit 4 hours. Prerequisite: GBIO 151 and BIOL 152 or equivalent. A general study of functions in organ systems of the human. Three hours of lecture and two hours of laboratory per week. Persons majoring in Biology may not use this course to fulfill their major requirements; however, it may be used to fulfill an elective requirement. A Laboratory fee is required for this course. (Fall)

**242. Principles of Human Biology.** Credit 4 hours. Prerequisite: GBIO 151 and BIOL 152 or equivalent. Principles of Human Biology has been primarily designed for students pursuing careers with curricula that require a single semester of human biology such as Kinesiology. The major areas of subject concentration are the muscular, cardiovascular, respiratory, nervous, and sensory systems. Biology majors may not use this course to fulfill their major requirements. However, it may be used to fulfill an elective requirement and in calculating cumulative and major averages. Three hours of lecture and two hours of laboratory per week. (As Needed)

**250. Human Anatomy and Physiology Lecture I.** [LCCN: CBIO 2213, Human Anatomy and Physiology I]. Credit 3 hours. Prerequisite: GBIO 151 and BIOL 152 and registration in or prior credit for ZOO 252 or permission of the Department Head. Topics covered include: anatomical terminology and the structure and function of molecules, cells, tissues, and the integumentary, skeletal, muscular, and nervous systems. Three hours of lecture per week. This course cannot be used as a concentration elective for Biology majors; however, it may be used as a general elective. (Summer, Fall, Spring)

**251. Human Anatomy and Physiology Lecture II.** [LCCN: CBIO 2223, Human Anatomy and Physiology II]. Credit 3 hours. Prerequisites: ZOO 250 and registration in or prior credit for Zoology 253 or permission of the Department Head. Topics covered include: the structure and function of the endocrine, reproductive, lymphatic, urinary, and excretory systems, energy & metabolism, and water & ion homeostasis. Three hours of lecture per week. This course cannot be used as a concentration elective for Biology majors; however, it may be used as a general elective. (Summer, Fall, Spring)

**252. Anatomy and Physiology Laboratory I.** [LCCN: CBIO 2211, Human Anatomy and Physiology I Lab]. Credit 1 hour. Prerequisites: Registration in or prior credit for Zoology 250. A series of laboratory exercises designed to illustrate the course material in Zoology 250. Two hours of laboratory per week. Persons majoring in Biology may not use this course to fulfill their major requirements; however, it may be used to fulfill an elective requirement. A Laboratory fee is required for this course. (Summer, Fall, Spring)

**253. Anatomy and Physiology Laboratory II.** [LCCN: CBIO 2221, Human Anatomy and Physiology II Lab]. Credit 1 hour. Prerequisites: Registration in or prior credit for Zoology 251. A series of laboratory exercises designed to illustrate the course material in Zoology 251. Two hours of laboratory per week. Persons majoring in Biology may not use this course to fulfill their major requirements; however, it may be used to fulfill an elective requirement. A Laboratory fee is required for this course. (Summer, Fall, Spring)

**301. Invertebrate Zoology.** Credit 4 hours. Prerequisite: GBIO 153 and BIOL 154 or equivalent. A general study of the principal forms of invertebrate animals. Two hours of lecture and four hours of laboratory per week. A Laboratory fee is required for this course. (Summer)

**302. Comparative Anatomy of the Vertebrates.** [LCCN: CBIO 3234, Comparative Anatomy Lec + Lab (Upper Level)]. Credit 4 hours. Prerequisite: GBIO 153 and BIOL 154 or equivalent. A comparative study of the anatomy of representative vertebrate animals. Three hours of lecture and three hours of laboratory per week. A Laboratory fee is required for this course. (Fall)

**331. Embryology.** Credit 4 hours. Prerequisites: Zoology 301 and GBIO 200. A comparative study of the embryology of invertebrates and vertebrates. Three hours of lecture and three hours of laboratory per week. A Laboratory fee is required for this course. (As Needed)

**332. Animal Histology.** Credit 4 hours. Prerequisite: GBIO 153 and BIOL 154 or equivalent and Junior standing or consent of the Department Head. A study of normal animal microscopic anatomy; correlations with cellular and tissue function are given. Two hours of lecture and four hours of laboratory per week. A Laboratory fee is required for this course. (Spring)

**352. Field Zoology.** Credit 4 hours. Prerequisite: GBIO 153 and BIOL 154 or equivalent and Junior standing or consent of the Department Head. A laboratory course designed to acquaint the student with the methods of collecting and identifying the common species of vertebrate animals found in Louisiana. One hour of lecture and six hours of laboratory per week. A Laboratory fee is required for this course. (As Needed)

**392. Animal Physiology.** Credit 4 hours. Prerequisite: GBIO 200 or consent of the Department Head. A comparative approach to study the fundamental mechanisms which underlie the basic physiological processes in animals. Laboratory will involve research experiments emphasizing hands-on instrumentation and computer usage, data analysis and scientific written reports. Three hours of lecture and three hours of laboratory per week. A Laboratory fee is required for this course. (Fall, Spring)

**409/509. General Entomology.** Credit 4 hours. Prerequisite: GBIO 153 and BIOL 154 or equivalent and Junior standing or consent of the Department Head. A general study of the earth's most diverse group of animals, the insects. Lecture will emphasize insect diversity, physiology, structure, and life history. Laboratory will focus on collection and identification of insects. Creation of an insect collection is a major component of the laboratory. Three hours of lecture and three hours of laboratory per week. A Laboratory fee is required for this course. (As Needed)

**428/528. Waterfowl Management.** Credit 3 hours. Prerequisite: GBIO 153 and BIOL 154 or equivalent and Junior standing or consent of the Department Head. A study of the principles, practices, and problems of waterfowl management, with an introduction to current research methods and pertinent literature. A two-hour laboratory stresses habitat evaluation with trips to waterfowl refuges. Waterfowl identification and

aquatic plant identification are other laboratory objectives. Two hours of lecture and two hours of laboratory per week. A Laboratory fee is required for this course. (As Needed)

**438/538. Mammalogy.** Credit 4 hours. Prerequisites: Zoology 302 and 352 or consent of the Department Head. A study of the life history, distribution, systematics, evolution, and adaptations of mammals. Two hours of lecture and four hours of laboratory per week. (As Needed)

**453/553. Ecological Parasitology.** Credit 4 hours. Prerequisite: GBIO 153, BIOL 154, and Junior standing or permission of the Department Head. Survey of the major parasitic taxa, including microparasites (protists) and macroparasites (helminths). Ecological aspects of host-parasite relationships, parasite life histories, and methods of transmission. Topics in the evolutionary ecology of parasites will focus on origins and evolution of complex life cycles, host specificity, and strategies of host exploitation. Patterns and processes of parasite aggregation, population dynamics, and community structure are analyzed. Four hours of lecture per week. (As Needed)

**455/555. Medical Parasitology.** Credit 4 hours. Prerequisite: GBIO 153, BIOL 154, and Junior standing or permission of the Department Head. A study of human parasites of significant medical importance. Two hours of lecture and four hours of laboratory per week. A Laboratory fee is required for this course. (As Needed)

**456/556. Ichthyology.** Credit 4 hours. Prerequisite: GBIO 153 and BIOL 154 or equivalent and Junior standing or permission of the Department Head. A study of the classification, structure, and life history of fishes, both freshwater and marine. Two hours of lecture and one four-hour laboratory per week. A Laboratory fee is required for this course. (Even Fall Semesters)

**457/557. Invertebrate Ecology.** Credit 4 hours. Prerequisite: Zoology 301 or equivalent or permission of the Department Head. Field and laboratory study of ecological relationships of invertebrate animals. Observation and collection of invertebrates in terrestrial, marine, estuarine, and freshwater environments. Identification and preservation of specimens in the laboratory. Two Saturday field trips. Two hours of lecture and four hours of laboratory per week. A Laboratory fee is required for this course. (As Needed)

**458/558. Fisheries Ecology and Management.** Credit 4 hours. Prerequisites: GBIO 151, GBIO 153, and Junior standing or permission of the Department Head. An evaluation of the theory and practice of fisheries ecology and management emphasizing management techniques and principles, including sampling and assessment methods, stocking, population and habitat manipulation, and regulations. The laboratory will focus on the use of sampling gears and data analysis. Two hours of lecture and four hours of lab per week. A Laboratory fee is required for this course. (As Needed)

**465/565. Animal Development.** Credit 4 hours. Prerequisite: GBIO 200. Credit for or enrollment in GBIO 312 also recommended. A study of the major patterns of animal development and the mechanisms responsible for cell differentiation during development. Three hours of lecture and three hours of lab per week. (As Needed)

**470/570. Ornithology.** Credit 4 hours. Prerequisites: Zoology 302 and 352 or consent of the Department Head. A study of the taxonomy, life history, distribution, evolution, and adaptations of birds. Two hours of lecture and four hours of laboratory per week. A Laboratory fee is required for this course. (As Needed)

**471/571. Comparative Endocrinology.** Credit 4 hours. Prerequisite: ZOO 392 or equivalent or permission of the Department Head. A study of the hormones regulating reproduction, growth, and homeostasis in animals, including humans. Three hours of lecture and three hours of laboratory per week. A Laboratory fee is required for this course. (As Needed)

**475/575. Animal Behavior.** Credit 4 hours. Prerequisite: GBIO 200 or permission of Department Head. This course will examine the biological basis of animal behavior, including molecular, cellular, physiological, ecological, and evolutionary aspects of survival and reproduction. Three hours of lecture and three hours of laboratory per week. A Laboratory fee is required for this course. (Fall)

**483/583. Introduction to Paleontology.** Credit 4 hours. Prerequisite: GBIO 153 and BIOL 154 or equivalent and Junior standing or consent of the Department Head. A study of vertebrate evolution from Devonian fishes to man. The course is divided between vertebrate evolution and anthropology. Field experience will be emphasized using and teaching basic techniques and concepts. Three hours of lecture and two hours of laboratory per week. A Laboratory fee is required for this course. (As Needed)

**488/588. Cytology.** [LCCN: CBIO 4143, Cell Biology (Upper Level)] Credit 3 hours. Prerequisite: GBIO 153, BIOL 154, and Junior standing or permission of the Department Head. A study of cellular anatomy, including the major cell organelles. Three hours of lecture per week. (Odd Spring Semesters)

**499/599. Neurobiology.** Credit 4 hours. Prerequisite: GBIO 200 or permission of the Department Head. A physiological approach to the study of the nervous system. The laboratory will focus on neurophysiology and neuroanatomy. Three hours of lecture and three hours of laboratory per week. A Laboratory fee is required for this course. (Spring)

**605. Developmental Biology.** Credit 3 hours. A study of the molecular interactions and processes which occur during the developmental phases of organelle, cell, and tissue formation. Three hours of lecture per week.

**608. Fisheries Biology.** Credit 3 hours. Prerequisite: Zoology 456/556. Research methods in fishery biology; life histories, environmental relations, and fishery management problems. One hour of lecture and four hours of laboratory per week. A Laboratory fee is required for this course. (As Needed)

**611. Advanced Invertebrate Zoology.** Credit 4 hours. Prerequisite: Zoology 301 or equivalent. A study of the phylogeny, morphology, and biology of invertebrate animals. Two hours of lecture and four hours of laboratory per week. A Laboratory fee is required for this course. (As Needed)

**630. Herpetology.** Credit 4 hours. Prerequisite: Zoology 352 or equivalent. A course dealing with the survival strategy of amphibians and reptiles. Areas of study include evolution, dispersal, and populations of these organisms with emphasis on their role in the various ecosystems. Three hours of lecture and two hours of laboratory per week. A Laboratory fee is required for this course. (As Needed)

**635. Endocrinology.** Credit 4 hours. A study of the evolution, pharmacology, physiology, and structure of endocrine glands and hormones. This will include not only the medical implications, but also the role of hormones in the survival strategy of various organisms. Three hours of lecture and four hours of laboratory per week. A Laboratory fee is required for this course. (As Needed)

**645. Environmental Physiology.** Credit 4 hrs. A study of physiology in the content of an animal's physical, chemical, and social environment. Multiple levels of organization are considered, from organism to biochemistry. Three hours of lecture and three hours of laboratory per week. A Laboratory fee is required for this course. (As Needed)