

## STUDENT LEARNING OBJECTIVES

### Animal Science and Pre-Veterinary Science majors

Learning Objective 1: **Cellular and Animal Biology:** Students will identify and define the role of the molecules that build cells, the foundations of cellular organization and communication, and the cellular assemblies that create the organs adapted to perform highly defined and required functions.

Learning Objective 2: **Cellular and Animal Anatomy and Physiology:** Students will recognize the anatomy of a variety of species including limbs and organs and the function of these organs that is required to establish and maintain homeostasis of living animals. Students will learn and perform basic reactions catalyzed by enzymes that make possible cellular function and homeostasis.

Learning Objective 3: **Animal Husbandry:** Students will identify different animals species, strains and breeds, the physiological and behavioral requirements for these species to thrive as well as how to feed them including formulation of rations, how to breed and manage them to assure their well-being and productivity. Students will gain knowledge on the principles of immunization and will practice immunization along with other routine mgmt. procedures. Students will perform physical exams of a variety of species.

Learning Objective 4: **Laboratory techniques and biotechnology:** Besides learning the basis of laboratories techniques used in clinics and common microbiological and biotechnology procedures, students will run these procedures and clinical tests.

Learning Objective 5: **Scientific awareness:** Students will receive broad training in basic biological and physical sciences including upper-level coursework in genetics, immunology, reproduction and nutrition providing an emphasis on health-related technologies.

Learning Objective 6: **Analytical skills:** Students will acquire basic knowledge in mathematics and statistics. Students will design trials to demonstrate advantages and disadvantages of treatment and procedures. Students will catalog and analyze information.

Learning Objective 7: **Critical and ethical thinking/problem solving:** In addition to standard knowledge (fact-based), students are expected to develop abilities to gather information needed to address broad questions. Students will learn ethical use of animals for research and production.

Learning Objective 8: **Communication:** Students will write a cover letter such as those required for a job application or for applying to professional schools, will prepare a professional CV, write a lab report; summarize the main points of a manuscript and prepare a professional presentation either from data in the literature or from their own collected information.