



CAL POLY

Animal Science

COLLEGE OF AGRICULTURE, FOOD
& ENVIRONMENTAL SCIENCES

Department of Animal Science

We develop graduates effecting positive change in the world using hands on learn by doing in our sustainable production systems and through innovative research.

PROGRAM LEARNING OUTCOMES (PLO), EDUCATIONAL OBJECTIVES (EO) and LEARNING OBJECTIVES. *All Graduates of the Animal Science Department will:*

PLO 1: Demonstrate problem solving skills.

EO 1: Gather appropriate knowledge and information to formulate a solution and then articulate a response to a problem.

- Identify sources that are pertinent and reliable
- Distinguish between refereed (e.g. academic peer-reviewed journals) and non-refereed sources.
- Utilize and apply previously learned knowledge
- Communicate the solution in written, oral or demonstrative format.

EO 2: Define a problem and identify or develop potential alternatives

- Identify core factors that contribute to a problem
- Form a hypothesis that will reveal the underlying characteristics of a problem
- Demonstrate evidence that the scientific method has been used to integrate knowledge and explore solutions to a problem.

PLO 2: Integrate and apply technical and conceptual knowledge.

EO 1: Demonstrate knowledge in basic concepts relevant to animal science including the principles of nutrition, reproduction, genetics and genomics, physiology, anatomy, behavior, animal health, welfare and ethics, environmental monitoring, land sustainability, and animal-based food safety and processing.

- Describe, classify, distinguish, explain, and interpret concepts in animal sciences and animal husbandry.

EO2: Demonstrate how the various animal sciences are integrated into a whole animal system

- Explain the ways in which human health, animal health and environmental health are interconnected (One Health).
- Articulate with specific examples how human management of animals for agriculture, conservation, companionship, or display/entertainment can maintain, improve, and/or degrade environmental quality and sustainability.

EO3: Demonstrate knowledge in the safe production of high-quality animal-based food products.

- Articulate and demonstrate knowledge of quality assurance measures and their importance for safety and quality of animal products.
- Explain the factors that comprise a safe and high-quality product
- Describe the characteristics consistent with a safe and nutritious animal product.

EO 4: Employ current and cutting-edge technologies across animal industries and how they can be applied to the study of animal sciences.

- Utilize current technologies associated with chosen concentration and demonstrate proficiency in the application of technology to the study of animal sciences.

PLO 3: Communicate effectively in a professional manner.

EO 1: Demonstrate an ability to clearly convey an idea or point of view in both oral and written formats.

- Produce examples of scientific / technical writing, including writing abstracts, introduction/literature reviews, methods, results, discussion and conclusions.
- Communicate science in an oral format utilizing different techniques (e.g. scientific poster presentation or research seminar)
- Demonstrate ability to formulate and articulate a response to a spontaneously provided question in both written and oral formats
- Practice correct methods for citing sources of information.

EO 2: Summarize and discuss topics in animal sciences from a variety of perspectives.

- Gather, organize, integrate and interpret information in order to successfully participate in a respectful and informed intellectual debate on animal science related topics.
- Translate technical scientific writing into plain language for non-technical audiences.

EO 3: Maintain a high level of professionalism in all forms of communication.

- Demonstrate the appropriate level of communication, knowledge, attire and demeanor which is suitable to the variety of social circumstances a professional animal scientist may need to function credibly (i.e. in employment interviews, scholastic presentations, professional meetings, workplace interactions, public demonstrations).

PLO 4: Demonstrate a proficiency in working as a leader and as a part of a team to achieve common goals.

EO 1: Practice and refine management skills

- Exhibit competent leadership that is attested to by peers and faculty.
- Demonstrate proficiency in making meaningful contributions to respectful and collaborative teamwork among peers in order to advance toward a common goal.
- Practice self-directed and self-motivated learning.

EO 2: Understand work responsibilities consistent with job requirements.

- Demonstrate the work ethic required to accomplish common goals, including timeliness and adherence to safe workplace training protocols.

PLO 5: Exhibit an understanding of their professional and ethical responsibilities as animal scientists, including a respect for diversity.

EO 1: Ensure that all animal interactions comply with the highest level of animal welfare standards.

- Understand principle components of animal welfare and how to apply them in different animal systems

EO 2: Participate in diversity related activities within the animal science discipline

- Discuss respectfully, arguments from both sides of controversial animal issues.
- Provide examples of adapting to changing societal attitudes and perceptions as they relate to human-animal interactions.