

## Introductory Animal Sciences H200 Aims and Justification

Introductory Animal Sciences embodies fundamental concepts in areas of genetics, reproduction, nutrition, behavior, and biotechnology as it applies to animals kept for human benefit. Students are introduced to the molecular and cellular mechanisms that underscore the function of biological systems and how knowledge in this area is applicable toward advancement of domestic animals. The course is a core course in the Animal Sciences Department and currently offers an honors embedded version. However, challenges exist in maintaining the course as an honors embedded course as enrollment during AU 2006 and 2007 was 22, greatly exceeding the maximum of 12 students recommended for honors embedded courses. Even as honors admittance requirements in 2008 became increasingly stringent, current enrollment remains at approximately 20 students.

In the currently offered honors embedded version of Introductory Animal Sciences, honors students attend and participate in regularly scheduled non-honors lectures and meet outside of the course to engage in a research experience that expands on course concepts. The research experience has been well received as it provides students hands-on opportunities learning laboratory techniques and their application to furthering understanding of basic biological principles. However, as the lecture is integrated with non-honors students in a class size of 100, it does not provide the enriched academic environment to promote personal development, a goal of the honors program. Thus, it is our intention to offer ANIM SCI 200 as a separate honors course AU 2009, fulfilling both an Animal Sciences major requirement and a GEC requirement in the Natural Sciences. The primary aim of H200 is to foster student's interest in basic sciences by offering a course that centers around student-centered learning and the foundation of research. In addition to retaining the Organ Systems project, the honors research component of the embedded course, the following changes are proposed for the new ANIM SCI H200 course:

- Integration of student-centered learning techniques into traditional instructor led lectures. Students will be assigned a team and asked to analyze a course related concept. Students will be required to develop knowledge about the topic and execute an effective way of teaching the topic to their peers.
- Scientific evaluation of popular literature. Students will be required to read *Portrait of a Burger as a Young Calf* and will evaluate the science that supports or refutes a selected passage from the book. The goal is for students to gain an appreciation of how to interpret scientific data and learn to discern between fact based and sensationalized media.
- Exploration of research methodology and technology that enhances the well-being of animals kept for human benefit and the products they provide. Students will apply concepts covered in lecture to hands-on-experiences. Students will visit the OSU animal centers that maintain various animals of agricultural significance, learn of the production practices employed, and participate in routine activities that are required to maintain these animals. Each tour will be followed the subsequent week by a laboratory activity that will allow students to explore further the science behind the animal industries.

Offering students these learning opportunities will meet the goals of the honors program to enrich intellectual development and offer greater academic challenges. In addition, H200 aims to establish a foundation for retention and success in the sciences early in the student's academic career. The opportunities provided in H200 have the additional benefit of encouraging the retention of women as educators and leaders in the sciences as the number of women interested in a honors 200 course, evidenced by the embedded version, has exceeded 75% of total enrollment.