Undergraduate Program Assessment

Department of Veterinary and Animal Sciences

Student Learning Objectives

• Scientific awareness: Broad training in basic biological and physical sciences.
• Analytical skills: The sciences demand quantitative skills supported by requirements in mathematics and statistics.
• Animal biology: Required coursework within the Department focusing on understanding the foundations of cellular communication and organization to create tissues to perform specific functions. The courses also build practical skills in understanding the physiological and behavioral requirements of various species of animals and building practical decision-making skills regarding how to feed, how to breed and manage animals to assure their well-being and productivity.
• Food animal production and biotechnology: In addition to the focus on assuring health and welfare of animals, we develop an understanding of the use of animals in food production. The growing use of animals in biotechnology to produce pharmaceutical products is addressed throughout upper-level coursework in genetics, immunology, reproduction and nutrition providing an emphasis on health-related technologies.
• 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.
• Communication: Strengths in written and verbal communication are fundamental to being able to contribute to one’s profession.

Direct Assessment tools

• Analytical skills and oral and written communication skills are assessed by faculty in our courses and at the annual Science Day, in which students deliver 12 minute oral presentations or present posters on their independent study research. These assessments have led to the elucidation of standards for these presentations, specifically that quantitative data is preferred and it must be analyzed using statistical tests for significance.

Indirect Assessment tools

• Surveys of students interested in our major who attend Fall and Spring open houses as to their projected career plans revealed that 80-90% plan on attending veterinary medical school. However, only 20-25% of our seniors apply for admission to veterinary medical school. The difference in the two numbers has lead us to focus on students who need to be trained in marketable skills in biotechnology, business, veterinary medicine and animal management.
• Exit surveys of our graduating seniors so that we can gather suggestions for improvement, make correlations between GPA/GRE and veterinary/medical school or graduate school admissions, and maintain a database of our students’ career plans for future contacts for our Careers in Animal Science course and other career advising.

Recent activities

• Annual Faculty Teaching Retreat to assess formally how students are responding to the curriculum. Faculty and departmental curriculum committee discussions about expectations (i.e. what material students should have learned previously) and how courses build upon each other are ongoing in faculty meetings and by email.
• Meetings with the admission counselors and dean of Tufts Veterinary School to discuss our curriculum and advising support for our students applying to veterinary medical school in the Tufts early admission program and at the usual time as seniors.
• We offer a 1 credit Careers in Animal Science course, support students working in species specific animal groups (i.e. Sheep, Goat, Cattle, and Poultry), train students in our laboratories year round, and encourage students to apply for summer research fellowships at biotechnology companies and at universities.