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A Strategy for Undergraduate Student Development in Animal Science

A.S. Leaflet R3280

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Overview

The Department of Animal Science at Iowa State University has experienced a tremendous increase in undergraduate enrollment in the past decade, yet the placement rate of graduates remains at almost 98%. While the industry continues to expand its demand for qualified graduates, this placement rate is not accomplished by chance or without a strategy. This strategy is put into place during the prospective student visit which often occurs during the student's junior or senior year of high school, and continues throughout their career at Iowa State University.

Before Arriving on Campus

Most high school students schedule campus visits during their junior and senior years of high school. Many students visit more than one college or university while making their decision. Iowa State University campus visits are usually scheduled through the Soultz Family Visitor Center, and include a visit to the academic department of the student's choosing. This opportunity to visit with faculty and students within the major of interest is not considered routine on all campuses, and appears to be much appreciated by prospective students and their families.

In a typical daily academic visit, the families are greeted by office staff and an "AnCY Guide", or student ambassador. They are given informational materials and have the ability to interact with the AnCY Guide informally for a few minutes, often asking questions about student life, residence halls, and classes.

A faculty member then meets with families, covering a variety of topics about the undergraduate experience in the Department of Animal Science. Most prospective students are interested in classes and the curriculum, scholarships, and student organizations. Internships, study abroad experiences, undergraduate research, and other opportunities are also discussed to allow prospective students to leave campus with an increased awareness of the breadth and depth of the opportunities within Animal Science. The AnCY Guide then escorts the families to their next appointment, providing another opportunity for the families to ask questions and hear a student's perspective.

Off to the Right Start - The Freshman Experience

All incoming students, both freshmen and transfers, are enrolled in AN S 110 – Orientation in Animal Science. This course has a number of objectives: 1) to inform students of the plethora of campus resources, from tutors to counseling services that can help make them succeed; 2) to expose students to the breadth of opportunities within the animal science industry; 3) to develop materials such as a resume and a 4-year plan that guide students through college and into the work force; and 4) to create connections and relationships within the department.

First semester students also begin building rapport with their academic adviser, and are assigned to small groups of peers and a Peer Mentor. These small groups meet weekly during class to discuss numerous topics and issues that first semester students may face. This learning community model, tied in with the orientation course have been critical to the success, retention and development of incoming students.

A Strong Curriculum

The Curriculum Committee in the Department of Animal Science meets regularly throughout the spring and fall semesters, continually tweaking the graduate and undergraduate curricula. The result is a strong, science-based curriculum coupled with hands-on experiences in a multitude of laboratory class sections. Access to livestock is an essential component; most students do not have experience with farm animal species, and those that enter college with some background may either have extensive experience with one species but not others or (more likely) have 4-H or FFA show ring experience without commercial production experience. Lab class sections are also effective in reducing class size.

Support for Students

There are a multitude of support services on campus for student success. The use of faculty academic advisers is part of the student success equation for students in the Department of Animal Science. Many students may change their initial career interests (i.e. vet school) during their undergraduate career, but with appropriate and timely career mentoring, most students do not change their major and instead find a rewarding career in another area of animal science. Providing students with information on the vast array of employment opportunities, including vet school, is important to retention, graduation and placement rates.

Peer Mentors, a strong start in the orientation course, and encouragement to get involved in student organizations

and activities within the department help build a sense of community and belonging for students

“The Other 50%”

While the importance of a strong GPA and thorough, scientifically-based curriculum with experiential learning cannot be underemphasized, students also need to begin building their resume from the day they step foot on campus as a student. There are hundreds of student organizations for students to get involved in. Current students organize over 100 events involving animal science each year, and incoming students are encouraged to “show up and jump in”, learning the ropes, meeting new people and eventually taking a leadership role on committees and executive boards.

Internships, while not required in the curriculum, are essential to successful placement rates. With more conversations about internships and exposure to CALS Career Fair as an early assignment in AN S 110, more and more freshmen indicated that they are actively seeking an internship after their first year in college (66% of freshmen entering ISU Animal Science direct from high school in Fall 2017). Most Animal Science, Dairy Science and General Pre-Veterinary Medicine internships are paid, and most students complete at least two internships during their college experience.

An increasing number of students are also seeking undergraduate research experiences. Work study, student worker positions in labs or at the farms, Science With Practice and Honors programs are all excellent ways to gain experience. Faculty investing time, grant money and other resources on these undergraduate students often identify potential graduate students for their programs.

Finally, at least half of undergraduates in the department complete an international experience before graduation. While an entire semester abroad is an enlightening and valuable experience, it is not possible for every student. Therefore, faculty-led travel courses have increased in demand in recent years. These semester-long courses focus on specific topics and include 11-16 days in country as a class to allow students to gain perspective and learn about both culture and agriculture/animal science.

Conclusion

Undergraduate students in the Department of Animal Science are fortunate to have a wide variety of experiences available to them during their career, contributing to the excellent placement rate of graduates. However, this is not achieved by chance. Opportunities for students to develop leadership and life skills through involvement in clubs and organizations, hone their scientific knowledge and skills in a research lab, explore international experiences or investigate careers through internships complement the curriculum and are critical to overall student success.