

PROGRAM OVERVIEW

Level V Program: CTAHR

Level VI: Human Nutrition, Food and Animal Sciences

I. Program Overview

Mission: The Department of Human Nutrition, Food and Animal Sciences enhances nutrition and health by education of people and developing and disseminating science-based information to promote sustainable food and animal systems appropriate for the Pacific Region.

Goals:

1. Ensure sustainable and profitable agricultural and food production systems.
2. Enhance research and instruction through the fundamental understanding of animal/human physiology.
3. Foster an integrated and interdisciplinary approach to learning that prepares students to be effective and productive citizens and life-long learners in a global society.
4. Have a safe and secure food system.
5. Have healthy well-nourished population in the Pacific Region.

Degree Programs:

BS in Food Science and Human Nutrition, with options in human nutrition (including sports nutrition), dietetics, and science education

BS in Animal Science, including pre-veterinary medicine

MS in Human Nutrition, Food and Animal Sciences, with options in Nutritional Sciences, Food Sciences, and Animal Sciences

PhD in Nutritional Sciences in planning stage

Current Research and Extension Programs:

Goal 1: Livestock waste management

Production management for aquaculture, beef, dairy and swine

Food product development

Range and forage management

Goal 2: Muscle physiology and growth

Mineral availability and metabolism

Physiology of obesity

Reproductive physiology, role of prostaglandins

Goal 3: 4-H livestock program

Leadership camp for HNFAS students

Learning through community projects and internships

Goal 4: Quality Assurance programs

Food microbiology

Safe food handling education

Goal 5: Healthy living in the Pacific islands

Expanded Food and Nutrition Education Program

Community nutrition and nutritional epidemiology

Food composition database
Sports nutrition

II. Program Profile

See tables for quantitative and qualitative performance data.

III. Self Assessment

Strengths - Instruction

Student numbers have been steadily increasing and are up 20% since FY 2002-03.

The undergraduate program in Dietetics is accredited by the Commission on Accreditation for Dietetics Education of the American Dietetic Association. Of graduates who apply for post-BS internships or seek advanced degrees 95% are accepted, compared a national acceptance rate of 70%. Within 6 months of completion of an internship or graduate program 80% of graduates residing in Hawai'i have paid employment related to their major.

All senior undergraduate students participate in a practicum in their field prior to graduation. Supervisors of the field experience consistently rate our students as highly employable, and several students each semester receive a job offer at the end of this experience.

Graduates of our programs in both Food Science and Human Nutrition and Animal Sciences have good acceptance rates into professional programs, including veterinary medicine, medical school and science education.

Strengths - Research and Extension

Over the last five years grant funding has averaged over \$60,000 per research FTE.

Nutrition research is tackling the challenges such as obesity, iron bioavailability, and the role of calcium. Nutrition education workshops reach approximately 700 families statewide each year, and thousands more are reached by regular newspaper columns on nutrition written by departmental faculty. Nutrition research and education programs reach throughout the American Pacific.

Animal Science research areas include animal feeds, reproductive success, and biotechnology. Livestock agents in all the counties work directly with livestock producers and processors to improve management and increase profitability. Our environment benefits when livestock producers adopt best management practices for livestock waste management. Our economy benefits when departmental specialists consult on projects such as the \$3,000,000 new farmer-owned livestock slaughter facility on O`ahu.

Weaknesses

The department offers several undergraduate classes related to aquaculture, and has a group of

graduate students pursuing aquaculture related MS degrees. Although the department has only one faculty member specializing in aquaculture, relationships with other institutions such as the Oceanic Institute and Hawai'i Institute of Marine Biology enable us to offer a competitive program. Our undergraduate program suffers, however, from lack of visibility, since it is not identified other than as an Animal Science degree. Expansion of research and extension in aquaculture is needed to support a rapidly expanding industry. As wild fish stocks decline, increasing interest in aquaculture provides an opportunity that we do not want to miss.

According to the most recent available data for 2004-05, our student semester hours per faculty at 276 and average class sizes of 18.8 are the highest in the college and far above the Manoa averages of 172 and 11.3 respectively. In 2006-2007, animal science faculty taught an average of 20.4 credits of regularly scheduled courses per instructional FTE.

IV. Goals for Biennium

A major goal of the department is to develop a Certificate in Aquaculture for undergraduates selecting appropriate classes as part of their BS degree. This would give much more visibility to the program and has the potential to substantially increase student numbers. This would be designed as an advising program, similar to the Marine Option Program, and would direct students to select aquaculture-related classes in this and other departments to fit into their BS programs. The Certificate would be designed to make the most effective use of existing resources, and could be created with the addition of two faculty positions specializing in aquaculture. One position would be focused on research in aquaculture biotechnology, and the other on aquaculture production and extension. Instructional and advising responsibilities would be shared between the two positions.