DEPARTMENT OF POULTRY SCIENCE

Growth of the poultry industry has created the need for scientific, technical and business knowledge in the various fields important to successful poultry production. In few fields of science is an understanding of the basic sciences, nutrition, genetics, physiology, diseases, biotechnology, processing and marketing more rewarding than in the modern, intensive methods of poultry and food production. Students are trained in the necessary background, analytical skills, problem solving and leadership for complex production units, hatcheries, integrated feed mills, processing plants and research laboratories. Rapid industry growth provides many career opportunities for graduates. Students are given two emphasis areas in which to specialize their education toward their selected career goals. The University Core Curriculum courses and the Poultry Science Core courses are required for both emphases. Students then complete a BS degree in either emphasis area by completing the respective emphasis area courses. All students are strongly encouraged to get early and frequent academic counseling which is readily available.

Faculty

Alvarado, Christine Z, Professor
Poultry Science
PHD, Texas A&M University, 2001

Athrey, Giridhar N, Assistant Professor
Poultry Science
PHD, University of Louisiana at Lafayette, 2009

Bailey, Christopher A, Professor
Poultry Science
PHD, Texas A&M University, 1982

Berghman, Luc R, Associate Professor
Poultry Science
PHD, University of Leuven, Belgium, 1987

Caldwell, David J, Professor
Poultry Science
PHD, Texas A&M University, 1997

Carey, John B, Professor
Poultry Science
PHD, Kansas State University, 1982

Duong, Tri, Associate Professor
Poultry Science
PHD, North Carolina State University, 2008

Farnell, Morgan B, Associate Professor
Poultry Science
PHD, Texas A&M University, 2003

Farnell, Yuhua Z, Instructional Assistant Professor
Poultry Science
PHD, Texas A&M University, 2002

Lee, Jason T, Associate Professor
Poultry Science
PHD, Texas A&M University, 2006

Pillai, Suresh D, Professor
Poultry Science
PHD, University of Arizona, 1989

Sams, Alan R, Professor
Poultry Science
PHD, University of Florida, 1987

Walzem, Rosemary L, Professor
Poultry Science
PHD, University of California, Davis, 1987

Majors

• Bachelor of Science in Poultry Science, Industry Emphasis (http://catalog.tamu.edu/undergraduate/agriculture-life-sciences/poultry-science/industry-bs-emphasis)
• Bachelor of Science in Poultry Science, Technical Emphasis (http://catalog.tamu.edu/undergraduate/agriculture-life-sciences/poultry-science/technical-bs-emphasis)

Minors

• Poultry Science Minor (http://catalog.tamu.edu/undergraduate/agriculture-life-sciences/poultry-science/minor)

Courses

POSC 201 General Avian Science
Credits 3. 3 Lecture Hours.
Introduction to the poultry industry to include past, present and future industry dynamics; avian anatomy/physiology as they impact commercial production; management principles and practices of breeding, incubation, brooding, nutrition, disease control and marketing technology.

POSC 285 Directed Studies
Credits 1 to 4. 1 to 4 Other Hours.
Directed studies in specific problem areas of poultry science.
Prerequisite: Approval of instructor.

POSC 289 Special Topics in...
Credits 1 to 4. 1 to 4 Lecture Hours.
Selected topics in an identified area of poultry science. May be repeated for credit.
Prerequisite: Approval of instructor.

POSC 291 Research
Credits 1 to 2. 1 to 2 Other Hours.
Research conducted under the direction of faculty member in poultry science. May be repeated times for credit.
Prerequisites: Freshman or sophomore classification and approval of instructor and department head.

POSC 302 Avian Science Laboratory
Credit 1. 2 Lab Hours.
Field trips and application of basic skills in production of poultry meat and eggs. Recommended supplement to POSC 201.
Prerequisite: Junior or senior classification or approval of instructor.
POSC 304 Judging
Credits 3. 6 Other Hours.
Intensive, individualized training in selection standards for meat and egg strains of poultry, grading standards for egg and live and ready-to-cook poultry, and organizing and managing poultry shows. Practice requires visits to processing plants.
Prerequisite: Junior or senior classification or approval of instructor.

POSC 308 Avian Anatomy and Physiology
Credits 3. 2 Lecture Hours. 3 Lab Hours.
Anatomy and physiology of the major body systems of the bird, including the cardiovascular, gastrointestinal, respiratory, endocrine and reproductive systems; influence of the environment on bird physiology, including effects of stress. Laboratory exercises include dissection and microscopic analysis of the major body system and assessment of environmental conditions.
Prerequisites: BIOL 111; POSC 201; junior or senior classification or approval of instructor.

POSC 309 Poultry Meat Production
Credits 4. 3 Lecture Hours. 2 Lab Hours.
Modern integrated broiler and turkey production; housing and equipment, nutrition, flock health, pest control, grower relations, marketing and financial management; lab involves blood testing, growth trials, posting birds, processing, and observation of a local integrated poultry operation.
Prerequisite: Junior or senior classification or approval of instructor.

POSC 313 Game Birds and Ornamental Fowl
Credits 3. 3 Lecture Hours.
Commercial game bird production; nutrition, incubation, rearing, breeder care, diseases, marketing, housing requirements and economic considerations; management of rare and ornamental fowl.
Prerequisite: Junior or senior classification or approval of instructor.

POSC 319 Breeder and Hatchery Management
Credits 3. 2 Lecture Hours. 2 Lab Hours.
Housing and equipment, incubation technology, embryology, nutrition and flock health; lab involves hatchery management, blood testing, semen evaluation, artificial insemination, basic embryology and observation of a local hatchery.
Prerequisite: Junior or senior classification or approval of instructor.

POSC 326 Commercial Egg Industry
Credits 3. 3 Lecture Hours.
Production, management, marketing, economics and integration of commercial laying hen operations.
Prerequisite: Junior or senior classification or approval of instructor.

POSC 333 Instincts and Behavior
Credits 3. 3 Lecture Hours.
Investigation of the reasoning behind evolved reproductive strategies with integration of veterinary and avian science perspectives; examination of individual differences in behavior and their development in particular environments.
Prerequisite: Junior or senior classification or approval of instructor.

POSC 381 Investigation of Professional Development in Poultry Science
Credits 2. 2 Other Hours.
An investigation of career options and the research process as applied to poultry science.
Prerequisite: Junior or senior classification or approval of instructor.

POSC 382 Skills in Poultry Evaluation
Credit 1. 2 Lab Hours.
Practical application of judging and husbandry skills used in poultry exhibition and production. Primarily designed for preservice vocational agriculture teachers.
Prerequisite: Junior or senior classification or approval of instructor.

POSC 405/FSTC 405 Egg and Poultry Meat Processing
Credits 3. 3 Lecture Hours.
Principles of egg and poultry meat processing, understanding egg and poultry meat markets, egg and meat grading, product safety, packaging and consumer acceptance of shell eggs and poultry meat; specifically turkey and broilers.
Prerequisite: Junior or senior classification or approval of instructor.
Cross Listing: FSTC 405/POSC 405.

POSC 406/FSTC 406 Poultry Further Processing
Credits 4. 3 Lecture Hours. 2 Lab Hours.
Science and practice of value-added products; physical, chemical, microbiological and functional characteristics of value-added poultry products as they affect consumer acceptance, efficiency of production and regulatory approval.
Prerequisites: CHEM 222; DASC 326/FSTC 326/FSTC 326/DASC 326; POSC 309; POSC 405/FSTC 405; junior or senior classification or approval of instructor.
Cross Listing: FSTC 406/POSC 406.

POSC 411 Poultry Nutrition
Credits 3. 3 Lecture Hours.
Principles of poultry nutrition with emphasis on all major nutrient classes and their relationships with the avian digestive system.
Prerequisites: CHEM 222 or equivalent; junior or senior classification or approval of instructor.

POSC 412 Poultry Feed Formulation
Credit 1. 1 Lecture Hour.
Practical feeding of poultry with emphasis on specific nutrient requirements of various species and computer least cost diet formulations.
Prerequisites: POSC 411; junior or senior classification or approval of instructor.

POSC 414 Avian Genetics and Breeding
Credits 3. 2 Lecture Hours. 2 Lab Hours.
Basic concepts of avian genetics and breeding principles, inheritance of economically important qualitative and quantitative traits; statistical analysis of breeding results; application of molecular genetics, mating systems analyses, breeder management; and incubation of hatching eggs.
Prerequisite: Junior or senior classification or approval of instructor.

POSC 425 Environmental Physiology
Credits 3. 3 Lecture Hours.
Environmental influences on the physiology of animals and humans; review of shelter engineering to promote animal welfare and production during stressful climatic conditions. Chronic and acute stress in a variety of birds and animals.
Prerequisite: Junior or senior classification or approval of instructor.
POSC 427 Animal Waste Management  
Credits 3. 3 Lecture Hours.  
An applied approach to current and emerging issues relating to responsible management of animal waste; the role of biological aspects of production management decisions evaluated in an examination of regulatory and environmental requirements; current case studies and exposure to field situations. Field trips may be required for which departmental fees may be assessed.  
Prerequisite: Junior or senior classification or approval of instructor.

POSC 429 Advanced Food Bacteriology  
Credits 4. 3 Lecture Hours. 2 Lab Hours.  
Microbiology of foodborne human pathogens of food animals, raw and processed food, and human disease; methods to control incidence of pre- and post-harvest contamination.  
Prerequisites: DASC 326/FSTC 326 or FSTC 326/DASC 326 or BIOL 351 or VTPB 405; junior or senior classification.

POSC 444 International Poultry Production  
Credits 3. 3 Lecture Hours.  
Two-week intensive and comparative on-site study of international poultry production; rearing and husbandry, housing and equipment, nutrition, flock health and processing.  
Prerequisite: Junior or senior classification.

POSC 454 Animal Welfare  
Credits 3. 3 Lecture Hours.  
Issues from an animal’s perspective; opportunities to study the general questions that typically affect the welfare of an animal; insight to practices that can be used to improve the welfare of an animal.  
Prerequisite: Junior or senior classification.

POSC 481 Poultry Science Systems  
Credits 2. 1 Lecture Hour. 2 Lab Hours.  
Individual and team approaches for the collection, interpretation, synthesis and presentation of information on integration of all aspects of the poultry industry to address issues facing it; emphasis on oral and written communication.  
Prerequisite: Senior classification.

POSC 484 Internship  
Credits 0 to 5. 0 to 5 Other Hours.  
A supervised internship in the poultry industry to provide practical experience in a real world setting that is consistent with the student’s professional interests.  
Prerequisites: Junior or senior classification and approval of department head.

POSC 485 Directed Studies  
Credits 1 to 4. 1 to 4 Other Hours.  
Directed study of selected problems not covered by other courses in the department. Content of course will be adapted to interest and needs of students.  
Prerequisites: Junior or senior classification and approval of instructor.

POSC 489 Special Topics in...  
Credits 1 to 4. 1 to 4 Lecture Hours.  
Selected topics in an identified area of poultry science. May be repeated for credit.  
Prerequisites: Junior or senior classification and approval of instructor.

POSC 491 Research  
Credits 0 to 4. 0 to 4 Other Hours.  
Research conducted under the direction of faculty member in poultry science. May be repeated 3 times for credit. Registration in multiple sections of this course are possible within a given semester provided that the per semester credit hour limit is not exceeded.  
Prerequisites: Junior or senior classification and approval of instructor and department head.