

Department of Animal Sciences (ANSC)

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The main function of the Department of Animal Sciences is to produce qualified graduates capable of serving the region in all areas of animal science: research, services, business, and education.

The department participates in offering courses within the FAFS undergraduate core program. Selected senior courses that cover areas of major importance in animal agriculture (i.e., nutrition, physiology, management, production) are also offered to students wishing to select an area of emphasis in animal sciences.

The following courses are offered by the department:

Course Descriptions

Core Courses for the BS Degree in Agriculture

ANSC 222	General Livestock Production	2.3; 3 cr.
Modern principles and practices in beef, sheep, and dairy production and reproduction.		
ANSC 226	Poultry Production	2.3; 3 cr.
Modern principles and practices in poultry production with special emphasis on Middle Eastern conditions. <i>Prerequisite: ANSC 271.</i>		
ANSC 271	Animal Nutrition	3.0; 3 cr.
Structure and functioning of digestive systems of livestock and poultry; bioenergetics, nutritional deficiencies, and nutrient requirements of farm animals. <i>Prerequisite: NFSC 261.</i>		
ANSC 275	Anatomy and Physiology of Farm Animals	3.0; 3 cr.
Systematic anatomy and physiology of farm animals.		

Elective Courses for the BS Degree in Agriculture

ANSC 241	Principles of Dairying	2.3; 3 cr.
Management, housing, feeding, breeding, and record-keeping in dairy production.		
ANSC 242	Small Ruminant Production in Arid Regions	2.3; 3 cr.
Breeding, feeding, and management of sheep and goats under arid conditions.		
ANSC 276	Animal Physiology Laboratory	0.3; 1 cr.
<i>Pre- or co-requisite: ANSC 275.</i>		

- ANSC 277** **Animal Breeding** **2.0; 2 cr.**
Principles of permanent improvement of animal and poultry production. *Prerequisite: AGRL 243 or BIOL 223.*
- ANSC 278** **Feeds and Feeding** **2.3; 3 cr.**
Characteristics, conservation, and preparation of feeds; feeding of various classes of livestock.
- ANSC 279** **Companion Pet Birds and Animals** **3.0; 3 cr.**
Breed and stock selection, equipment, stocking densities, routine management, rearing, feeding, behavior and interaction with humans, optimum production, and health care of pet birds and pet animals. *Open only to non-science majors.*
- ANSC 280** **Aquarium, Marine, and Farming Fish** **3.0; 3 cr.**
A course that covers the different fishing techniques, fish farming, characteristics of fish, comparison of classes of fish, the setup of fresh water and marine aquariums, and the common diseases of fish.
- ANSC 281** **Production of Novel Avian Species** **3.0; 3 cr.**
Management practices in the production of economically beneficial avian species other than the domestic chicken (e.g., ratites, turkey, water fowl, etc.).
- ANSC 282** **Pet Birds and Animals** **3.0; 3 cr.**
A course that describes the anatomy and physiology of pets belonging to mammalia, reptilia, aves, and osteichthyes. The history, classification, breeds, selection, rearing, feeding, production, and health of sixteen pets will be studied. *Prerequisite: BIOL 200.*
- ANSC 299** **Special Topics in Animal Sciences** **2 cr.**
Directed study. Tutorial. *Prerequisites: fourth year standing and consent of instructor.*

Graduate Programs

The department offers programs of study and research leading to MS degrees in animal science and poultry science. The candidates have the choice of selecting a thesis or non-thesis program. The non-thesis candidate is required to take additional credits, and his/her research normally will be more field-oriented, with a research report presented instead of a thesis. The department is especially qualified and equipped for graduate study and research in the following areas:

- nutrition of livestock and poultry
- diseases of livestock and poultry, including preventive immunology and epizootiology of diseases
- production of milk, meat, and eggs as related to breeding and feeding

Graduate students in the department may become candidates for a degree in the interfaculty program in nutrition by meeting the requirements described in the Graduate Studies section of this catalogue.

ANSC 300	Graduate Tutorial	1–3 cr.
Special problem. <i>Prerequisite: consent of instructor.</i>		
ANSC 304	Preventive Immunology and Patterns of Animal Diseases	3.0; 3 cr.
Basic aspects of specific and non-specific body defense mechanisms and the role of vaccination in population protection; study of the patterns of diseases. <i>Prerequisite: BIOL 224 or AGRL 224.</i>		
ANSC 305	Poultry Diseases	3.0; 3 cr.
Etiology, clinical characteristics, identification, prevention, and control of the major infectious and metabolic diseases of poultry.		
ANSC 306	Diseases of Livestock	3.0; 3 cr.
Etiology, clinical characteristics, identification, and control of some selected infectious and metabolic diseases of economic impact on animal production.		
ANSC 307	Poultry Production in Warm Regions	3.0; 3 cr.
Recent advances in poultry production practices under high temperature conditions with special emphasis on physiology of heat stress in birds as related to housing, management, and feeding. <i>Prerequisite: ANSC 226.</i>		
ANSC 329	Advanced Animal Physiology	2.3; 3 cr.
Comparative physiology of domestic animals with special emphasis on digestion, reproduction, lactation, and thermo-regulation. <i>Prerequisite: ANSC 275 or equivalent.</i>		
ANSC 330	Advanced Livestock Production	3.0; 3 cr.
Recent advances in livestock production practices as related to interactions between animal and milieu with reference to the specific nutritional and climatic conditions of the Middle East.		
ANSC 334	Advanced Poultry Nutrition	2.3; 3 cr.
Recent developments in poultry nutrition; design and implementation of poultry nutrition experiments. <i>Prerequisite: ANSC 271.</i>		
ANSC 336	Ruminant Nutrition	3.0; 3 cr.
Recent advances in the nutrition of cattle and sheep with reference to microbiological aspects of digestion and its relation to practical feeding.		
ANSC 388	Animal Production and Environmental Management	3.0; 3 cr.
Characterizes the impact of extensive and intensive livestock systems on the environmental sustainability of the two systems in terms of technical constraints and feasible corrective environmental management strategies.		
ANSC 395	Graduate Seminar in Animal Science	1.0; 1 cr.
ANSC 399	MS Thesis	