Department of Animal and Veterinary Sciences (AVSC)

Chairperson: Hamadeh, Shady
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Vision

The department of Animal and Veterinary Sciences strives to be recognized as a center of excellence in animal and veterinary sciences education, research and outreach. The Department works to attract and maintain a diversified and highly qualified student body.

Mission

The main function of the Department of Animal and Veterinary Sciences is to produce qualified graduates capable of serving the region in all areas of animal and veterinary sciences: research, services, business, and education. The Department offers two graduate programs of study leading to MS degrees in Animal Science and Poultry Science that prepare students for life-long learning and professional advancement in the field. The Department is also engaged to serve the animal and veterinary sector in Lebanon and the region by providing extension work, consultations, and diagnostic support.

Undergraduate Program

The department participates in offering courses within the FAFS undergraduate core programs. 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

AVSC 222  General Livestock Production  2.3; 3 cr.
Modern principles and practices in beef, sheep, and dairy production and reproduction.

AVSC 224  Agricultural Microbiology  2.3; 3 cr.
A course that covers basic and applied microbiology. The basic microbiology includes bacteriology, virology, parasitology, and immunology, and the applied microbiology includes veterinary, soil, water, and food microbiology.
AVSC 226  Poultry Production  2.3; 3 cr.
Modern principles and practices in poultry production with special emphasis on Middle Eastern conditions. **Prerequisite:** AVSC 271.

AVSC 243  Genetics  3.0; 3 cr.
Principles of inheritance, with an introduction to modern genetics.

AVSC 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. **Prerequisite:** NFSC 261.

AVSC 275  Anatomy and Physiology of Farm Animals  3.0; 3 cr.
Systematic anatomy and physiology of farm animals.

**Core Course for the BS Degree in Agribusiness**

AVSC 220  Livestock Production  3.0; 3 cr.
The course is divided into three main sections. The first section introduces the types and breeds of livestock, terminology, methods, management systems, techniques of animal production and consumer impact. The second section introduces the students to the modern management practices required for the production of economically beneficial avian species including the domestic chickens, turkeys, water fowls, game birds and others. The third section discusses the nature of economic diseases in domestic animals and avian species and the regulations of World Trade Organization in import and export of animals, including rules that prevent the trans boundary transmission of microbes causing economic diseases.

**Elective Courses for the BS Degree in Agriculture**

AVSC 241  Principles of Dairying  2.3; 3 cr.
Management, housing, feeding, breeding, and record-keeping in dairy production.

AVSC 242  Small Ruminant Production in Arid Regions  2.3; 3 cr.
Breeding, feeding, and management of sheep and goats under arid conditions.

AVSC 276  Animal Physiology Laboratory  0.3; 1 cr.
**Pre- or corequisite:** AVSC 275.

AVSC 277  Animal Breeding  2.0; 2 cr.
Principles of permanent improvement of animal and poultry production. **Prerequisite:** AVSC 243 or BIOL 223.

AVSC 278  Feeds and Feeding  2.3; 3 cr.
Characteristics, conservation, and preparation of feeds; feeding of various classes of livestock.

AVSC 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. **Free elective.**
AVSC 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. Free elective.

AVSC 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, and others.).

AVSC 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.

AVSC 299A  Special Topics in Animal Sciences for Agriculture program 2 cr.
Directed study. Tutorial. Prerequisites: Fourth year standing and consent of instructor.

Elective Course for the BS in Biology

AVSC 213/ BIOL 242  Comparative Animal Anatomy  3.2; 4 cr.
Comparative Anatomy is the study of differences in structure, form, and function among animals. I covers both invertebrates and vertebrate animals to examine organ structural design, origin and diversification over time.