DEPARTMENT OF ANIMAL SCIENCE AND VETERINARY TECHNOLOGY

Contact Information
Chair: Jason Apple  
Phone: 361-593-3376  
Email: jason.apple@tamuk.edu  
Building Name: Kleberg Agriculture Building  
Room Number: 130

Department curriculum is designed to provide students with foundation knowledge in basic and applied Animal Science (ANSC) and Veterinary Technology (VETT). The department emphasizes development of creative thinking and communication skills that are crucial for career success in the animal and veterinary sciences.

The curriculum balances presentation of theory in the classroom with hands-on experience in the field. The Texas A&M University-Kingsville Farm provides Animal Science majors experience in swine, beef and goat management. The Veterinary Technology Center provides technologically advanced facilities and equipment that permit the highest quality experiential learning for future Veterinary Technologists. The faculty are involved in research that keeps them abreast of current thinking in the animal science and veterinary technology fields to provide students with up-to-date information.

The department assesses its program by administering comprehensive examinations to undergraduates when they enter the program and during their last semester before graduation. Also, the department chair interviews graduating seniors to determine the impression on strengths, weaknesses and needs of the program. Results from these activities are used to continually update and improve undergraduate education.

Students majoring in Veterinary Technology (VETT) must receive a grade of C or better in all VETT courses. Failure to receive a C or better in any VETT course may result in immediate withdrawal from the Veterinary Technology program. Students would need to reapply to the program the following year.

Graduates from the department find employment with state and federal agencies or with ranches, farms, zoos, veterinary clinics and hospitals, as well as other private businesses. The undergraduate curriculum also prepares students for continued education at the Master of Science level.

University Teaching and Research Farm
The University Farm is a working laboratory that provides students with experiences in swine, beef cattle and meat goat management. The University Farm houses the only meat rabbit center in the state and demonstrates rabbit management and production practices.

The working and animal housing facilities at the University Farm allow faculty and students to conduct animal science and biomedical research involving cattle, goats, rabbits or swine. The University farm accommodates both applied livestock management and basic physiological research projects.

The University Farm is located one mile north of campus on Armstrong Street and includes over 650 acres of native brush, improved pastures, irrigated and dry-land plots, feed mill, rodeo arena and horse facilities and a covered livestock pavilion. In addition to the close proximity to campus, the diversity of livestock species, facilities and land use provides many educational opportunities for students and faculty in the College of Agriculture and Natural Resources. In addition, the University Farm hosts several yearly activities involving local and regional youth groups, including 4-H and FFA.

Faculty

Department Faculty
Apple, Jason Professor, Department of Animal Science and Veterinary Technology; Chair; B.S., Oklahoma State University; M.S., Kansas State University; Ph.D., Kansas State University.

Bell, Natasha Assistant Professor, Department of Animal Science and Veterinary Technology; B.S., Texas A&M University; M.S., Stephen F. Austin University; Ph.D., Texas A&M University.

Galloway, Cariann Assistant Professor of the Practice, Department of Animal Science and Veterinary Technology; B.S., Texas A&M University-Corpus Christi; D.V.M., Texas A&M University.

Garcia, Michelle Professor, Department of Animal Science and Veterinary Technology; B.S., University of Missouri-Columbia; M.S., University of Missouri-Columbia; Ph.D., Texas A&M University.
Hilton, Clayton  Associate Professor, Department of Animal Science and Veterinary Technology; B.S., Auburn University; M.S., Auburn University; D.V.M., Auburn University College of Veterinary Medicine.

Kuvlesky, Jr., William  Professor, Department of Animal Science and Veterinary Technology; Interim Chair, Department of Human Sciences; Assistant Dean, Dick and Mary Lewis Kleberg College of Agriculture, Natural Resources and Human Sciences; Caesar Kleberg Wildlife Research Institute; B.S., Texas A&M University; M.S., University of Wisconsin-Madison; Ph.D., Texas A&M University.

Lukefahr, Steven  Professor, Department of Animal Science and Veterinary Technology; Regents Professor; B.S., Texas A&I University; M.S., Oregon State University; Ph.D., Oregon State University.

Machado, Tanner  Associate Professor, Department of Animal Science and Veterinary Technology; B.S., Colorado State University; M.S., Colorado State University; Ph.D., South Dakota State University.

Machen, Richard  Professor, Department of Animal Science and Veterinary Technology; Paul Genho Endowed Chair in Ranch Management, King Ranch Institute for Ranch Management; B.S., Angelo State University; M.S., Texas A&M University; Ph.D., Texas A&M University.

Mathis, Clay P  Professor, Department of Animal Science and Veterinary Technology; Robert J. Kleberg, Jr. and Helen C. Kleberg Endowed Chair and Director, King Ranch Institute for Ranch Management; B.S., Texas A&M University; M.S., Texas A&M University; Ph.D., Kansas State University.

Stanko, Randy L  Professor, Department of Animal Science and Veterinary Technology; B.S., Colorado State University; M.S., Texas A&M University; Ph.D., North Carolina State University.

Courses

Animal Science (ANSC)

ANSC 0419  Introd to Animal Science  0 SCH (0)

ANSC 1211  Preparation for Animal Ag  2 SCH (2-0)
Key issues and trends impacting care and use of livestock, and domestic and companion animals. Career opportunities in the animal science profession.

ANSC 1419  Introd to Animal Science  4 SCH (3-2)
Basic scientific fundamentals of livestock production, including feeding and nutrition, reproductive physiology, selective breeding, health, management and marketing of major and minor species.
Fee: $5.00

ANSC 2307  Prin of Feeds and Feeding  3 SCH (3-0)
Chemical composition of feeds, utilization of nutrients, characteristics of feedstuffs and feed usage. Prerequisites: ANSC 1419, MATH 1314, CHEM 1311 plus CHEM 1111.

ANSC 2310  Livestock Mgmt Techniques  3 SCH (1-4)
Application of animal handling and management techniques for major and minor livestock species including behavior of livestock species relevant to handling, methods of restraint and blood sampling. Prerequisites: ANSC 1419 and sophomore standing.

ANSC 3302  Swine Management  3 SCH (3-0)
Systems of swine management including breeding, feeding and various management problems with their solutions. Prerequisites: ANSC 2307 and ANSC 2310.

ANSC 3304  Beef Management  3 SCH (3-0)
Systems of beef management including breeding, feeding and various management problems with their solutions. Prerequisites: ANSC 2307 and ANSC 2310.

ANSC 3305  Mkt Class and Grade Livestock  3 SCH (2-2)
Classifications and judging of livestock; factors affecting classification, grading and valuing and procedures of marketing livestock. Prerequisites: 9 semester hours of Agriculture including ANSC 1419.

ANSC 3306  Equine Management  3 SCH (3-0)
Principles of equine management, including conformation, nutrition, reproduction, health, and general management practices. Prerequisites: ANSC 2307 and ANSC 2310.

ANSC 3308  Sheep and Goat Management  3 SCH (3-0)
Systems of sheep and goat management for meat, fiber and milk including breeding, feeding and various management problems and their solutions. Prerequisite: 9 semester hours of animal science including ANSC 1419.

ANSC 3309  Meat Preparation and Eval  3 SCH (2-3)
Market class determination, live animal evaluation; slaughter, cutting, curing, carcass evaluation and grading. Prerequisites: ANSC 1419 and junior standing.
Fee: $5.00
ANSC 3313 Repro Physiol of Dom Animals 3 SCH (2-2)
Comparative anatomy and physiology of the male and female reproductive systems, endocrinology, gestation, parturition and lactation, management
techniques, performance traits and diseases. Prerequisites: ANSC 1419, BIOL 1308 and 1108, CHEM 1311 plus CHEM 1111.
Fee: $5.00

ANSC 3335 Animal Breeding and Genetics 3 SCH (3-0)
Introduction to genetic concepts and principles of livestock improvement involving gene function, molecular genetics, gametogenesis, Mendelian inheritance, selection and breeding systems. Prerequisite: ANSC 1419.

ANSC 3336 Artificial Breed of Livestock 3 SCH (2-3)
Study of artificial insemination techniques and reproductive technologies. Application of artificial insemination and pregnancy diagnosis techniques in
cattle, goats and swine. Prerequisites: ANSC 1419, ANSC 3313.
Fee: $5.00

ANSC 3390 Special Topics in Animal Sci 3 SCH (0-0-3)
Selected topics not currently available in existing courses. May be repeated once under different topic. Prerequisite: junior standing.

ANSC 3995 Internship 1-9 SCH (0-0-1-9)
Supervised and planned work experience under college guidelines in an agriculture enterprise or agency setting. Practical application of knowledge and
techniques of major subject area without classroom consultation, but with formal evaluation. May be repeated for a maximum of nine semester hours
toward degree, may not count toward minor. Prerequisite: written consent of adviser and dean.

ANSC 4301 Growth Physiol of Livestock Sp 3 SCH (3-0)
Study of the principles of growth and its measurement from the cell to the tissue to the entire animal. Prerequisites: ANSC 1419 and CHEM 2421 or CHEM 3323.

ANSC 4303 Anat and Phys of Dom Animals 3 SCH (3-0)
Introduction to the study of functional anatomy and fundamental physiological processes of domestic animals. Prerequisites: ANSC 1419 and CHEM 2421 or CHEM 3323.

ANSC 4305 International Animal Agric 3 SCH (3-0)
Global contributions of animal agriculture involving traditional and nontraditional species on the welfare of human development. Includes a review of
selected literature papers and a study of alternative livestock production systems especially appropriate for developing countries. Prerequisite: junior or senior standing.

ANSC 4307 Animal Nutrition 3 SCH (3-0)
Chemical composition of the animal, functions of nutrients, digestion, metabolism, physiological effects of feed additives. Prerequisites: ANSC 1419, CHEM 2421.

ANSC 4308 Statistics in Agriculture 3 SCH (3-0)
Basic and practical overview of agricultural experimentation, which includes an understanding of hypothesis testing, sampling, probability, and
analysis and interpretation of agricultural research data. Prerequisite: junior/senior standing.

ANSC 4385 Experimental Techniques 3 SCH (2-3)
Laboratory exercises and demonstrations of current biotechniques used in animal research and their application to management of animal and wildlife
species. Prerequisite: 9 semester hours of agriculture or approval of instructor.

ANSC 4395 Problems in Animal Science 1-3 SCH (1-3)
Literature review, laboratory field problem. May be repeated for a total of 6 semester hours, only 3 hours may count toward a minor. Prerequisite:
approval of supervising professor.

Veterinary Technology (VETT)

VETT 3209 Veterinary Parasitology 2 SCH (1-2)
Study of parasites common to domestic animals including zoonotic diseases. Prerequisites: VETT 3301, VETT 3303, VETT 3324, VETT 3402, and
VETT 3405, with a grade of C or better.

VETT 3301 Introduction to Vet Technology 3 SCH (1-3)
Survey of the profession of veterinary technology with emphasis on basic techniques, handling and care of animals and ethical and professional
requirements; Prerequisite: Admission into the Veterinary Technology Program.

VETT 3303 Veterinary Physiology 3 SCH (3-0)
Study of physiological functions and relationships of body systems in domestic animal species. Prerequisite: Admission into the Veterinary
Technology Program.

VETT 3306 Veterinary Diagnostic Imaging 3 SCH (1-3)
Presentation of theory, principles and practical application of diagnostic imaging techniques within the field of veterinary medicine. Prerequisites:
VETT 3301, VETT 3303, VETT 3324, VETT 3402, VETT 3405, and with a grade of C or better.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hours Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>VETT 3311</td>
<td>Vet. Disease Management II</td>
<td>3 SCH</td>
<td>(3-0-0)</td>
</tr>
<tr>
<td>VETT 3324</td>
<td>Vet. Disease Management I</td>
<td>3 SCH</td>
<td>(3-0-0)</td>
</tr>
<tr>
<td>VETT 3390</td>
<td>Spec Topics In Vet Tech</td>
<td>1,3 SCH</td>
<td>(1, 3-0-0)</td>
</tr>
<tr>
<td>VETT 3402</td>
<td>Veterinary Anatomy</td>
<td>4 SCH</td>
<td>(1-4-0)</td>
</tr>
<tr>
<td>VETT 3405</td>
<td>Vet. Nursing Technology I</td>
<td>4 SCH</td>
<td>(1-4-0)</td>
</tr>
<tr>
<td>VETT 3407</td>
<td>Vet Clinical Pathology I</td>
<td>4 SCH</td>
<td>(1-4-0)</td>
</tr>
<tr>
<td>VETT 3410</td>
<td>Clinical Externship I</td>
<td>4 SCH</td>
<td>(4-0-0)</td>
</tr>
<tr>
<td>VETT 3425</td>
<td>Vet. Nursing Technology II</td>
<td>4 SCH</td>
<td>(1-4-0)</td>
</tr>
<tr>
<td>VETT 4210</td>
<td>Clinical Externship II</td>
<td>2 SCH</td>
<td>(2-0-0)</td>
</tr>
<tr>
<td>VETT 4217</td>
<td>Veterinary Office Mgmt (WI)</td>
<td>3 SCH</td>
<td>(3-2-0)</td>
</tr>
<tr>
<td>VETT 4218</td>
<td>Vet Critical Care</td>
<td>2 SCH</td>
<td>(2-0-0)</td>
</tr>
<tr>
<td>VETT 4311</td>
<td>Surgical Nursing</td>
<td>3 SCH</td>
<td>(2-4-0)</td>
</tr>
<tr>
<td>VETT 4312</td>
<td>Veterinary Pharmacology</td>
<td>3 SCH</td>
<td>(3)</td>
</tr>
<tr>
<td>VETT 4315</td>
<td>Vet. Disease Management III</td>
<td>3 SCH</td>
<td>(3-0-0)</td>
</tr>
<tr>
<td>VETT 4317</td>
<td>Veterinary Office Mgmt (WI)</td>
<td>3 SCH</td>
<td>(3-2-0)</td>
</tr>
</tbody>
</table>

Continued study of common and zoonotic diseases of canines and felines encountered in the practice of veterinary medicine. Prerequisites: VETT 3301, VETT 3303, VETT 3324, VETT 3402, and VETT 3405 with a grade of C or better.

Introduction to the study of common and zoonotic diseases of canines and felines encountered in the practice of veterinary medicine. Prerequisite: Admission into the Veterinary Technology Program.

Selected topics not currently available in existing courses. May be repeated once under different topic. Prerequisite: Approval of instructor.

Gross anatomical study of body systems and their topographic relationships in domestic animal species. Prerequisite: Admission into the Veterinary Technology Program.

Common management practices, basic nursing skills, and care of canines and felines in a clinical setting. Prerequisite: Admission into the Veterinary Technology Program.

In-depth study of hematology, blood chemistries, microbiology, urinalysis and other diagnostic tests with emphasis on lab procedures. Prerequisites: VETT 3301, VETT 3303, VETT 3324, VETT 3402 and VETT 3405, with a grade of C or better.

Supervised and planned work experience under college guidelines in a veterinary clinical setting. Practical application of knowledge and skills of major subject area without classroom consultation, but with the formal evaluation. Prerequisites: VETT 3209, VETT 3301, VETT 3303, VETT 3306, VETT 3311, VETT 3324, VETT 3402, VETT 3405, VETT 3407, and VETT 3425, with a grade of C or better.

Common management practices, advanced nursing skills, and care of canines and felines in a clinical setting. Prerequisites: VETT 3301, VETT 3303, VETT 3324, VETT 3402, and VETT 3405 with a grade of C or better.

Supervised and planned work experience under college guidelines in a veterinary clinical setting. Practical application of knowledge and skills of major subject area without classroom consultation, but with the formal evaluation. Prerequisites: VETT 4311, VETT 4312, VETT 4413, VETT 4318, with a grade of C or better.

Practical experience in management of the veterinary practice. Emphasis on client relations, record keeping, inventory, employment skills, and computer skills in the veterinary environment. Prerequisites: VETT 4311, VETT 4312, VETT 4315, VETT 4319, VETT 4414, and VETT 4426, with a grade of C or better.

Fundamentals of emergency medicine including veterinary first aid, CPR, toxicology and specialized medical techniques and procedures. Prerequisites: VETT 4311, VETT 4312, VETT 4413, VETT 4318 with a "C" or better.

Supervised and planned work experience under college guidelines in a veterinary clinical setting. Practical application of knowledge and skills of major subject area without classroom consultation, but with the formal evaluation. Prerequisites: VETT 4312, VETT 4315, VETT 4319, VETT 4414, and VETT 4426, with a grade of C or better.

Fundamentals of advanced nursing care at the veterinary technologist level. Prerequisites: VETT 4312, VETT 4315, VETT 4319, VETT 4414, and VETT 4426, with a grade of C or better.

Fundamentals of common surgical procedures, asepsis, patient monitoring, and surgical instrument identification and care. Prerequisites: VETT 3306, VETT 3307, VETT 3308, VETT 3309, and VETT 4110 with a "C" or better.

Fundamentals of pharmacology including recognition, calculation, labeling, packaging, and administration of veterinary drugs, biologicals and therapeutic agents. Prerequisites: VETT 3209, VETT 3306, VETT 3311, VETT 3407, and VETT 3425, with a grade of C or better.

Common diseases, preventive medicine and nursing of food and fiber animals and horses in the practice of veterinary medicine. Prerequisites: VETT 3209, VETT 3306, VETT 3311, VETT 3407, and VETT 3425, with a grade of C or better.

Practical experience in management of the veterinary practice. Emphasis on client relations, record keeping, inventory, employment skills, and computer skills in the veterinary environment. Prerequisites: VETT 4311, VETT 4312, VETT 4313, and VETT 4314 with a "C" or better.
VETT 4318 Laboratory Animal Medicine  3 SCH (3-3-0)
Fundamentals of laboratory animal medicine including management, care and ethical use of animals. Basic handling, restraint and common veterinary procedures on small animals. Prerequisites: VETT 3306, VETT 3407, VETT 3309 and VETT 4210, with a grade of C or better.

VETT 4319 Vet. Clin. Path. II  3 SCH (1-3)
Continued study of hematology, blood chemistries, urinalysis and cytology with emphasis on lab procedures. Prerequisites: VETT 3209, VETT 3306, VETT 3311, VETT 3407, and VETT 3425, with a grade of C or better.

VETT 4320 Vet. Disease Mgt. IV  3 SCH (3-0-0)
Common diseases, preventive medicine and nursing of avian and exotic animals in the practice of veterinary medicine. Prerequisites: VETT 4312, VETT 4315, VETT 4319, VETT 4414, and VETT 4426, with a grade of C or better.

VETT 4323 Lab Animal/Sm. Mammal Mgt.  3 SCH (1-3-0)
Fundamentals of laboratory and small mammal medicine including management, husbandry, and common procedures. Prerequisites: VETT 4312, VETT 4315, VETT 4319, VETT 4414, and VETT 4426, with a grade of C or better.

VETT 4327 Vet. Nursing IV  3 SCH (1-3)
Feeding, common management practices and care of avian and exotic animals in a clinical or zoological setting. Prerequisites: VETT 4312, VETT 4315, VETT 4319, VETT 4414, and VETT 4426, with a grade of C or better.

VETT 4413 Large Animal Medicine  4 SCH (3-4)
Feeding, management practices and care of food producing animals and equine in clinical setting. Common diseases, preventive medicine and nursing of food producing animals and horses in the practice of veterinary medicine. Prerequisites: VETT 3306, VETT 3407, VETT 3408, VETT 3309 and VETT 4210, with a grade of C or better.

VETT 4414 Vet. Nursing III  4 SCH (1-4)
Feeding, management practices, and care of food and fiber animals and equids in a clinical setting. Prerequisites: VETT 3209, VETT 3306, VETT 3311, VETT 3407, and VETT 3425, with a grade of C or better.

VETT 4415 Anesthesia & Surgical Asst.  4 SCH (3-4)
In-depth application of surgical, obstetrical, and anesthesia techniques including identification and use of instruments and equipment. Prerequisites: VETT 4311, VETT 4312, VETT 4313, and VETT 4314 with a "C" or better.

VETT 4416 Avian & Exotic Animal Med.  4 SCH (3-4)
Feeding, common management practices and care of avian and exotic animals in a clinical or zoological setting. Common diseases, preventive medicine and nursing of avian and exotic animals in the practice of veterinary medicine. Prerequisites: VETT 4311, VETT 4312, VETT 4413, VETT 4318 with a grade of C or better.

VETT 4420 Vet. Anes./Surg. Nursing II  4 SCH (1-4)
In-depth application of surgical, obstetrical, and anesthesia techniques. Prerequisites: VETT 4312, VETT 4315, VETT 4319, VETT 4414, and VETT 4426, with a grade of C or better.

VETT 4426 Vet. Anes./Surg. Nursing I  4 SCH (1-4)
Fundamentals of veterinary anesthesia, patient monitoring, asepsis, and surgical instrument identification and care. Prerequisites: VETT 3209, VETT 3306, VETT 3311, VETT 3407, and VETT 3425, with a grade of C or better.

Degree Requirements

Majors