

# Department of Animal Science and Veterinary Technology

---

## Contact Information

**Chair:** Tanner Machado  
**Phone:** 361-593-2211  
**Email:** tanner.machado@tamuk.edu  
**Building Name:** Human Sciences Building  
**Room Number:** 101

Department curriculum is designed to provide students with foundation knowledge in basic and applied Animal Science (ANSC) and Veterinary Technology (VETT). The department emphasizes the 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 with experience in swine, beef and small ruminant (sheep 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 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 beef cattle, sheep and meat goat management. The working and animal housing facilities at the University Farm allow faculty and students to conduct animal science and biomedical research involving beef cattle, goats, and sheep. 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 450 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.

## Animal Science (ANSC)

### **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: ANSC 1419 and Junior standing.

**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 3307 Forage Production, Evaluation & Utilization 3 SCH (3-0)**

This course investigates multidisciplinary approaches toward the development, evaluation and utilization of integrated forage, livestock, and wildlife production systems that are economically feasible and environmentally sustainable. Prerequisites: ANSC 1419 and ANSC 2307. Junior or senior classification or instructor approval.

**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: ANSC 2307 and ANSC 2310.

**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 3310 Processed Meats 3 SCH (3-0)**

Fundamentals of processed meats, meat product development, and training for Hazard Analysis Critical Control Points (HACCP). Prerequisite: Junior or senior standing.

**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 1306 and BIOL 1106, CHEM 1311 and CHEM 1111; and junior standing.

Fee: \$5.00

**ANSC 3333 Domestic Animal Behavior 3 SCH (3-0)**

Principles of animal behavior with concentration on livestock animals emphasizing how behavior influences animal production and efficiency. Prerequisites: ANSC 1419 and sophomore or junior standing.

**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 and MATH 1314; junior standing.

**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 or senior 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 skills 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 instructor and department chair.

**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 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 3323.

**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 2307 and CHEM 3323.

**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: Math 1314 and junior/senior standing.

**ANSC 4310** Comparative Anatomy of Domestic Animals II **3 SCH (2-2)**

This course is designed to teach students about the functional anatomy of domestic animals. The course includes anatomical terminology and a detailed study of the skeletal system, muscle system, nervous system, and circulatory system. Prerequisites: ANSC 1419 and senior standing.

**ANSC 4317** Intensive Cattle Management **3 SCH (3-0)**

Production and management practices of the feedlot and dairy industries will be explored. Current issues, such as animal welfare, production efficiency, environmental impacts and health related risks will be addressed. Prerequisite: ANSC 2307; Junior or senior classification or instructor approval.

**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 1040** Veterinary Animal Care and Husbandry **0 SCH (0-1-0)**

Participate in the care and keeping of animals housed for teaching purposes in the Veterinary Technology Program. Credit/Noncredit. Registration required each semester while enrolled in the Veterinary Technology Program.

**VETT 2105** Veterinary Medical Calculations **1 SCH (1-1)**

Introduction to common veterinary medical calculations and measurements. Prerequisite: Admission to the Veterinary Technology Program.

**VETT 2201** Introduction to Veterinary Technology **2 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. Prerequisites: BIOL 1106 and BIOL 1306.

**VETT 2233** Veterinary Medical Terminology **2 SCH (2-0)**

Introduction to common veterinary medical terminology with emphasis on descriptive terms, common acronyms and abbreviations.

**VETT 3206** Veterinary Diagnostic Imaging **2 SCH (1-2)**

Presentation of theory, principles and practical application of diagnostic imaging techniques within the field of veterinary medicine. Prerequisite: Good standing within the Veterinary Technology Program as demonstrated by obtaining a grade of C or higher in VETT courses.

Fee: \$25.00

**VETT 3209** Veterinary Parasitology **2 SCH (1-2)**

Study of parasites common to domestic animals including zoonotic diseases. Prerequisite: Good standing within the Veterinary Technology Program as demonstrated by obtaining a grade of C or higher in VETT courses.

Fee: \$25.00

**VETT 3225** Vet. Nursing Tech for SA II **2 SCH (1-2)**

Common management practices, advanced nursing skills and care of canines and felines in a clinical setting. Prerequisites: Good standing within the Veterinary Technology Program as demonstrated by obtaining a grade of C or higher in VETT courses.

Fee: \$25.00

**VETT 3227** Vet Nur for Zoo & Wildlife Sp **2 SCH (1-2)**

Feeding, common management practices and care of avian and exotic animals in clinical or zoological setting. Prerequisite: Good standing within the Veterinary Technology Program as demonstrated by obtaining a grade of C or higher in VETT courses.

Fee: \$25.00

**VETT 3229** Vet. Clinical Pathology II **2 SCH (1-2)**

Continued study of hematology, blood chemistries, microbiology, urinalysis and cytology with emphasis on lab procedures. Prerequisite: Good standing within the Veterinary Technology Program as demonstrated by obtaining a grade of C or higher in VETT courses.

Fee: \$25.00

**VETT 3234** Veterinary Dentistry **2 SCH (1-2)**

Survey of veterinary dentistry topics and procedures with an emphasis on the technician's role in client education, instrument use and care, terminology and charting, intro-oral radiology and prophylactic procedures. Prerequisite: Good standing within the Veterinary Technology Program as demonstrated by obtaining a grade of C or higher in VETT courses.

Fee: \$25.00

**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 3311** Health Mgt. of SA II **3 SCH (3-0-0)**

Continued study of common and zoonotic diseases of canines and felines encountered in the practice of veterinary medicine. Prerequisite: Good standing within the Veterinary Technology Program as demonstrated by obtaining a grade of C or higher in VETT courses.

**VETT 3324** Health Mgt. of SA I **3 SCH (3-0-0)**

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.

**VETT 3328 Vet. Clinical Pathology I 3 SCH (1-3)**

In-depth study of hematology, blood chemistries, microbiology, urinalysis and other diagnostic tests with emphasis on lab procedures. Prerequisite: Good standing within the Veterinary Technology Program as demonstrated by obtaining a grade of C or higher in VETT courses.  
Fee: \$25.00

**VETT 3330 Veterinary Nursing Techniques for Small Animals I 3 SCH (2-3)**

Common management practices, basic nursing skills and care of canines and felines in a clinical setting. Prerequisite: Good standing within the Veterinary Technology Program as demonstrated by obtaining a grade of C or higher in VETT courses.  
Fee: \$25.00

**VETT 3390 Spec Topics In Vet Tech 1,3 SCH (1, 3-0-0)**

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

**VETT 3402 Veterinary Anatomy 4 SCH (3-4)**

Gross anatomical study of body systems and their topographic relationships in domestic animal species. Prerequisite: Admission into the Veterinary Technology Program.  
Fee: \$25.00

**VETT 3407 Veterinary Clinical Pathology I 4 SCH (3-4)**

In-depth study of hematology, blood chemistries, microbiology, urinalysis and other diagnostic tests with emphasis on lab procedures. Prerequisite: Good standing within the Veterinary Technology Program as demonstrated by obtaining a grade of C or higher in VETT courses.

**VETT 4135 VTNE Preparation 1 SCH (1-0)**

Detailed review of veterinary technology practice domains to better prepare students for taking the Veterinary Technician National Examination (VTNE). Prerequisite: Good standing within the Veterinary Technology Program as demonstrated by obtaining a grade of C or higher in VETT courses.

**VETT 4217 Veterinary Office Mgmt (WI) 2 SCH (2-0-0)**

Practical experience in management of the veterinary practice. Emphasis on client relations, record keeping, inventory, employment skills, and computer skills in the veterinary environment. Prerequisite: Good standing within the Veterinary Technology Program as demonstrated by obtaining a grade of C or higher in VETT courses.

**VETT 4221 Adv. Vet. Nursing Tech 2 SCH (1-2-0)**

Fundamentals of advanced nursing care at the veterinary technologist level. Prerequisite: Good standing within the Veterinary Technology Program as demonstrated by obtaining a grade of C or higher in VETT courses.

**VETT 4235 Veterinary Technician National Examination Preparation 2 SCH (2-0)**

Detailed review of veterinary technology practice domains to better prepare students for taking the Veterinary Technician National Examination (VTNE). Prerequisite: Good standing within the Veterinary Technology Program as demonstrated by obtaining a grade of C or higher in VETT courses.

**VETT 4236 Current Topics in Vet. Med. 2 SCH (2-0)**

Examination of contemporary topics related to the veterinary profession and practice of veterinary medicine. Prerequisite: Good standing within the Veterinary Technology Program as demonstrated by obtaining a grade of C or higher in VETT courses.

**VETT 4291 Global Veterinary Experience 2 SCH (2-0)**

Immersion into global veterinary medicine topics including wildlife medicine and conservation, safe capture and immobilization techniques and zoonotic diseases of concern. Prerequisite: Successful completion of VETT 4420 and VETT 4426. Good standing within the Veterinary Technology Program as demonstrated by obtaining a grade of C or higher in VETT courses.

**VETT 4311 Veterinary Anesthesia and Surgical Nursing I 3 SCH (1-5)**

Fundamentals of common surgical procedures, asepsis, patient monitoring, and surgical instrument identification and care. Prerequisites: Good standing within the Veterinary Technology Program as demonstrated by obtaining a grade of C or higher in VETT courses.

**VETT 4312 Veterinary Pharmacology 3 SCH (3-1)**

Fundamentals of pharmacology including recognition, calculation, labeling, packaging, and administration of veterinary drugs, biologicals and therapeutic agents. Prerequisite: Good standing within the Veterinary Technology Program as demonstrated by obtaining a grade of C or higher in VETT courses.

**VETT 4315 Health Management of Hoofstock 3 SCH (3-0-0)**

Common diseases, preventive medicine and nursing of food and fiber animals and horses in the practice of veterinary medicine. Prerequisite: Good standing within the Veterinary Technology Program as demonstrated by obtaining a grade of C or higher in VETT courses.

**VETT 4322 Health Mgt. of Zoo/Wildlife 3 SCH (3-0-0)**

Common diseases, preventive medicine and nursing of avian and exotic animals in the practice of veterinary medicine. Prerequisite: Good standing within the Veterinary Technology Program as demonstrated by obtaining a grade of C or higher in VETT courses.

**VETT 4323 Laboratory Animal and Small Mammal Management 3 SCH (2-3)**

Fundamentals of laboratory and small mammal medicine including management, husbandry, and common procedures. Prerequisite: Good standing within the Veterinary Technology Program as demonstrated by obtaining a grade of C or higher in VETT courses.  
Fee: \$25.00

**VETT 4331** Vet. Nurs. For Hoofstock **3 SCH (1-3)**

Feeding, management practices, and care of food and fiber animals and equids in a clinical setting. Prerequisite: Good standing within the Veterinary Technology Program as demonstrated by obtaining a grade of C or higher in VETT courses.

Fee: \$25.00

**VETT 4413** Health Management and Veterinary Nursing Techniques for Hoofstock **4 SCH (3-3)**

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. Prerequisite: Good standing within the Veterinary Technology Program as demonstrated by obtaining a grade of C or higher in VETT courses.

**VETT 4416** Health Mgt/VNT of Zoo/Wild Sp **4 SCH (3-2)**

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: Good standing within the Veterinary Technology Program as demonstrated by obtaining a grade of C or higher in VETT courses.

**VETT 4420** Veterinary Anesthesia and Surgical Nursing II **4 SCH (2-5)**

In-depth application of surgical, obstetrical, and anesthesia techniques. Prerequisite: Good standing within the Veterinary Technology Program as demonstrated by obtaining a grade of C or higher in VETT courses.

Fee: \$25.00

**VETT 4426** Vet. Anes./Surg. Nursing I **4 SCH (1-4)**

Fundamentals of veterinary anesthesia, patient monitoring, asepsis, and surgical instrument identification and care. Prerequisite: Good standing within the Veterinary Technology Program as demonstrated by obtaining a grade of C or higher in VETT courses.

Fee: \$25.00

**VETT 4910** Vet. Tech Clinical Externship **9 SCH (9-0)**

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 formal evaluation. Prerequisite: Good standing within the Veterinary Technology Program as demonstrated by obtaining a grade of C or higher in VETT courses.

## Majors

- Agriculture - Animal - Wildlife Veterinary Technology, B.S.
- Agriculture - Animal Science - Pre-Vet, B.S.
- Agriculture - Animal Science, B.S.

## Minors

- Animal Science, Minor

## Planned Course Offerings

This section provides a comprehensive list of courses offered by the Department of Animal Science and Veterinary Technology, along with a three-year schedule indicating when each course is expected to be available. Please note that course offerings and scheduling are subject to change based on faculty availability and student demand. It is recommended that students consult with their academic advisor to plan their course schedule accordingly.

### Animal Science (ANSC)

Course	Fall 2025	Spring 2026	Fall 2026	Spring 2027	Fall 2027	Spring 2028
ANSC 1211		X		X		X
ANSC 1419	X	X	X	X	X	X
ANSC 2307	X	X	X	X	X	X
ANSC 2310	X	X	X	X	X	X
ANSC 3302		X				X
ANSC 3304		X		X		X
ANSC 3305		X		X		X
ANSC 3306	X		X		X	
ANSC 3307	X				X	
ANSC 3308	X		X		X	
ANSC 3309		X		X		X
ANSC 3310	X		X		X	
ANSC 3313	X	X	X	X	X	X
ANSC 3333		X		X		X

ANSC 3335	X	X	X	X	X	X
ANSC 3336 <sup>1</sup>						
ANSC 3390	X	X	X	X	X	X
ANSC 3995	X	X	X	X	X	X
ANSC 4301	X				X	
ANSC 4303	X		X		X	
ANSC 4307	X	X	X	X	X	X
ANSC 4308	X	X	X	X	X	X
ANSC 4310		X		X		X
ANSC 4317		X		X		X
ANSC 4395	X	X	X	X	X	X

<sup>1</sup> This course is available during the summer term only.

## Veterinary Technology (VETT)

Course	Fall 2025	Spring 2026	Fall 2026	Spring 2027	Fall 2027	Spring 2028
VETT 1040	X	X	X	X	X	X
VETT 2105		X		X		X
VETT 2201	X		X		X	
VETT 2233	X		X		X	
VETT 3206	X		X		X	
VETT 3209 <sup>1</sup>						
VETT 3225	X		X		X	
VETT 3227 <sup>1</sup>						
VETT 3229		X		X		X
VETT 3234		X		X		X
VETT 3303		X		X		X
VETT 3311	X		X		X	
VETT 3324		X		X		X
VETT 3328	X					
VETT 3330		X		X		X
VETT 3390	X	X	X	X	X	X
VETT 3402		X		X		X
VETT 3407			X		X	
VETT 4135		X		X		
VETT 4217	X		X		X	
VETT 4221					X	
VETT 4235						X
VETT 4236		X		X		X
VETT 4291 <sup>1</sup>						
VETT 4311				X		X
VETT 4312		X		X		X
VETT 4315	X		X			
VETT 4322 <sup>1</sup>						
VETT 4323		X		X		
VETT 4331	X		X			
VETT 4413					X	
VETT 4416 <sup>1</sup>						
VETT 4420	X		X		X	

VETT 4426	X			
VETT 4910	X		X	X

<sup>1</sup> This course is available during the summer term only.

## Marketable Skills

Texas A&M University-Kingsville is committed to preparing students for success beyond the classroom by helping them develop marketable skills. These are the interpersonal, cognitive, and applied abilities that today's employers value most. Our academic programs are designed to help students build these essential competencies through a blend of academic coursework, hands-on learning, research opportunities, internships, and extracurricular involvement.

Below are the marketable skills provided by each of the department's academic programs.

### Animal Science

- Master the depth of knowledge required for the degree
- Critical thinking
- Effective communication
- Ability to work collaboratively
- Demonstrate social, cultural, and global competencies

### Veterinary Technology

- Master the depth of knowledge and skillset required for the degree
- Effective oral and written communication
- Demonstrate critical thinking and decision formulation
- Hands-on experience with animal care, restraint, diagnosis, and treatment
- Demonstrate social and workplace competencies