



## **VETT 305/306 Veterinary Anatomy and Physiology I**

### **Course Narrative:**

This is the first of a two-course sequence examining the structure and function of comparative vertebrate animal body systems important in health and disease. Terminology and nomenclature of the veterinary field will be emphasized. A systems approach to prepare students to locate and recognize clinically significant anatomical features. In conjunction with classroom instruction, the anatomy and physiology lab component for this course requires students to apply knowledge from the classroom to hands-on and critical-thinking application exercises.

Prerequisites: VETT 100, VETT 101 and ANS 1319. Corequisites: VETT 306 Vet A&P Lab I

### **Objectives/ Rationale:**

- Develop an understanding animal anatomy and corresponding physiology
- Discuss in scientific terms anatomy of animals
- Comparative analysis of various domesticated species and domestic species

**Meeting Times:** Monday, Wednesday and Friday (MWF); 10am- 10:50am

**Labs (VETT 306):** logged times

**Meeting Location:** AG/ET 253

### **Instructor Information:**

Instructor: Landon Sullivan, PAS

Office Location: AG/ET 233G

Office Hours: TR ~9am-9:50am (233G) and 2pm-2:50pm (AnSc Lab)

University Email Address: [Landon.Sullivan@tamuc.edu](mailto:Landon.Sullivan@tamuc.edu)

### **Suggested textbooks and materials:**

Materials:

- 70-page spiral notebook and writing utensil (required)

Text:

- Clinical Anatomy & Physiology for Veterinary Technicians, any edition (Colville and Bassert; ISBN-13: 978-0323227933)
- Clinical Anatomy and Physiology Laboratory Manual for Veterinary Technicians, any edition (Colville and Bassert; “Lab Manual”)
- Anatomy of Domestic Animals, Systemic & Regional Approach, any edition (Pasquini; lab manual = “The bible of veterinary anatomy”; ISBN-13: 978-0962311420)

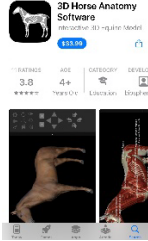
*The syllabus/schedule are subject to change.*

### Resources Needed:

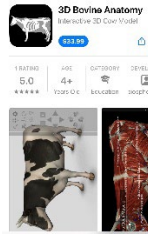
Students should obtain a 70-page spiral notebook and writing utensil to be utilized in every class.

Apps for VETT 306: these, as well as any others related

- 3D Horse Anatomy Software (Interactive Equine Model)



- 3D Bovine Anatomy (Interactive 3D Cow Model)



### Instructional Method:

- Notes should be taken daily.
- Daily quizzes will be given with no notice (students should be prepared to take one each class).
- A midterm and final exam may be assigned OR exams following discussions of systems
- Article summaries, power point presentations, field experience, quizzes and other projects may be assigned at any time throughout the course.

### Dress and Conduct:

Students are expected to wear or have immediate access to clothing practical for handling various domesticated species, including but not limited to: boots (shoes that cover and protect entire foot), pants and shirts that protect skin of extremities as well as a hat (caps or some type of lid to protect eyes and cranium); scrubs and a muck-type boot.

In the event we travel off campus, students are expected to exhibit courtesy, respect, kindness and grace to all participants and hosts; failure to represent TAMUC in a professional manner during such an event can result in administrative withdrawal from the course or further disciplinary action.

### Assessment Techniques:

- Pre-evaluation
- daily quizzes
- course portfolio
- midterm evaluation
- final evaluation

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## Student Learning Outcomes (SLOs):

At the completion of this course, students should be able to:

- Express knowledge of general anatomy
- Discuss anatomy and physiology of muscular, skeletal, neural, circulatory, endocrine, digestive and reproductive systems in various domesticated species
- Discuss regulation of reproduction by manipulation of the endocrine system
- Illustrate, identify and describe female reproductive anatomy, female endocrinology (hypo-pituitary-gonadal hormonal cascade) and female reproductive cycles, seasonality oogenesis, folliculogenesis, ovulation, and the corpus luteum
- Illustrate, identify and describe male reproductive anatomy, endocrinology (hypo-pituitary-gonadal hormonal cascade) and spermatogenesis
- Discuss sexual behavior, fertilization, maternal recognition of pregnancy
- Recognize embryonic and fetal development, sexual differentiation, placentation, endocrinology of pregnancy and parturition
- Compare hyperplasia and hypertrophy
- Compare ovarian structures of various domesticated species
- List primary anatomical structures of the male and female reproductive systems.
  - a. List the source and site of action for the following: FSH, GnRH, PGF<sub>2</sub>alpha, LH, E<sub>2</sub>, T and P<sub>4</sub>
- Distinguish autocrine, paracrine, and endocrine signaling
- List the primary anatomical structures of the circulatory system
- Distinguish primary functions of red blood cells and white blood cells
- Discuss blood flow from heart-to-heart
- Describe the primary functions of the muscle system
- List types of muscles and where we find those
- Describe deciduous teeth
- Compare teeth in various domesticated species
- Recognize and identify surface anatomy of various domesticated species
- Utilize anatomical and directional terminology to identify and/or describe the location, region and sectional plane of structures or lesions on an animal body
- Identify major bones of the skeletal system within various domesticated species
- Describe ligaments, tendons and cartilage
- Discuss regulation of reproduction by manipulation of the endocrine system
- Describe cornified epithelium
- Illustrate and identify the primary components of the monogastric, ruminant, and avian digestive systems
- Discuss the stomach (regions, cells and function)
- Discuss the small intestine (components and functions)
- Discuss the large intestine (components and functions)
- Discuss the digestive roles of the liver, gall bladder and pancreas
- Describe myogenesis, osteogenesis, adipogenesis
- Describe the role(s) of tails

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## Course Requirements and Grading:

### **Portfolio:** 20%

The Journal grade is the grade of the students' notes (70-page spiral notebook) completed throughout the course. The journal/ portfolio will be graded based on the contents of notes presented each day, organization, and overall appearance.

- Rubric for Portfolio: Complete 20%; Chronological Order 20%; Legible 20%; Condition 20%; Submitted Timely 20%

### **Daily Assignments/ Quizzes:** 30%

Daily assignments/ quizzes are assigned each day to review information portrayed in the previous lesson and bring students to a teachable moment for the new/ next lesson.

### **Exams:** 20%

Exams will be administered upon completion of systems (most of these have been posted on social media and can be viewed at anytime for study guides)

### **Lab:** 30%

You will need to log hours on your own time throughout the semester, using several interactive apps (listed in "Resources Needed"); you will need to observe several necropsy videos of my own I share in this course and we will perform necropsy on deads we have this fall at the necessary times and in accordance with out IACUC protocols- students that can attend will log those hours

The point outline is tentative and is subject to change at the instructor's discretion. The guideline below is applicable to the actual total amount of points given.

Grading Scale (%)	
90 – 100	A
80 – 89	B
70 – 79	C
60 – 69	D
Below 60	F

### **Course Policies: Technology and Media**

- Cell Phones – the use of a cell phone is acceptable during the duration of this course BUT **noise from a cell phone is not tolerated**. Students should expect to be dismissed from class upon engaging in talking or texting on cell phone devices
- Lap Tops, Tablets – are also welcomed but the majority of notes, daily assignments, quizzes and exams must be handwritten
- Social Media – photos and videos recorded during lecture or any field/ laboratory exercises are **NOT** to be shared via social media without the direct consent of the instructor. Posting intellectual property can result in severe legal and academic consequences.

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## TECHNOLOGY REQUIREMENTS

### LMS

All course sections offered by Texas A&M University-Commerce have a corresponding course shell in the myLeo Online Learning Management System (LMS). Below are technical requirements

LMS Requirements:

<https://community.brightspace.com/s/article/Brightspace-Platform-Requirements>

LMS Browser Support:

[https://documentation.brightspace.com/EN/brightspace/requirements/all/browser\\_support.htm](https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm)

YouSeeU Virtual Classroom Requirements:

<https://support.youseeu.com/hc/en-us/articles/115007031107-Basic-System-Requirements>

### ACCESS AND NAVIGATION

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or [helpdesk@tamuc.edu](mailto:helpdesk@tamuc.edu).

**Note:** Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

### COMMUNICATION AND SUPPORT

If you have any questions or are having difficulties with the course material, please contact your Instructor.

#### Technical Support

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found here:

<https://community.brightspace.com/support/s/contactsupport>

#### University Specific Procedures

##### Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment.

The Code of Student Conduct is described in detail in the [Student Guidebook](#).

<https://inside.tamuc.edu/campuslife/campusservices/studentRights/Code%20of%20Conduct.aspx>

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: <https://www.britannica.com/topic/netiquette>

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## **TAMUC Attendance**

For more information about the attendance policy please visit the [Attendance](#) webpage and [Procedure 13.99.99.R0.01](#).

<http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx>

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf>

## **Academic Integrity**

Students at Texas A&M University-Commerce are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

[Undergraduate Academic Dishonesty 13.99.99.R0.03](#)

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf>

[Graduate Student Academic Dishonesty 13.99.99.R0.10](#)

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/graduate/13.99.99.R0.10GraduateStudentAcademicDishonesty.pdf>

## **Students with Disabilities-- ADA Statement**

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

### **Office of Student Disability Resources and Services**

Texas A&M University-Commerce

Gee Library- Room 162

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

Email: [studentdisabilityservices@tamuc.edu](mailto:studentdisabilityservices@tamuc.edu)

Website: [Office of Student Disability Resources and Services](#)

<http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/>

## **Nondiscrimination Notice**

Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

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### Campus Concealed Carry Statement

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the [Carrying Concealed Handguns On Campus](#) document and/or consult your event organizer.

Web url:

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

Week 1	Express knowledge of general anatomy
Week 2-4	Recognize embryonic and fetal development, sexual differentiation, placentation, endocrinology of pregnancy and parturition
Week 5-8	
Week 7-9	
Week 9-15	Discuss anatomy and physiology of muscular, skeletal, neural, circulatory, endocrine, digestive and reproductive systems in various species of various domesticated species
Week 14-16	Illustrate, identify and describe male and female reproductive anatomy, female endocrinology and female reproductive cycles, seasonality oogenesis, folliculogenesis, ovulation, and the corpus luteum
Week 15-16	Illustrate, identify and describe male reproductive anatomy, endocrinology and spermatogenesis
	Discuss stages of parturition, lactation and puberty
	Illustrate and identify the primary components of the monogastric, ruminant, and avian digestive systems
	Discuss other systems (components and structures, including but not limited to: skeletal, digestive, muscular, respiratory, circulatory, adrenal)

**NOTE:**

This is a tentative schedule, which is subject to change at anytime during the duration of the semester. (we will most likely complete exams after units rather than having midterms)

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