



VET 106

Animal Anatomy & Physiology

Prerequisite(s): Program Admission
Corequisite(s): VET 101

Quarter(s) Offered: Fall
Class Hours: 4
P Lab Hours: 6
Credit Hours: 6

Course Description:

This course will provide an overview of the functional anatomy and physiology of domestic animals commonly encountered in veterinary medicine. Emphasis is placed on the parts (gross anatomy) and function (physiology) of the systems of the animal body and the associated medical terminology. In addition, radiographic and microscopic anatomy (histology) will be introduced. Topics include: musculoskeletal system, digestive system, cardiovascular system, cutaneous system, hematopoietic system, respiratory system, urogenital system, nervous system and special senses, and the endocrine system.

Student Learning Outcomes:

For each of the major body systems (musculoskeletal, digestive, cardiovascular, cutaneous, hematopoietic, respiratory, urogenital, nervous, endocrine) and the organs associated with the special senses, the student will:

1. Define the terminology associated with the system.
2. Name and locate the gross anatomical parts of the system using diagrams, dissected specimens, skeletons, or anatomical models.
3. Identify and name the structures associated with the system visible on radiographic images.
4. Define the basic functional unit of the system.
5. List the functions of the system.
6. Discuss the principle anatomical and physiological similarities and differences among domestic animal species.

Grading Scale:

The grading scale is detailed in the *Catalog and Student Handbook* and listed below for reference. All faculty members follow this scale when assigning grades to reflect a given student's performance in the classroom.

Grade	Numerical Equivalent	Grade Point
A	90-100	4
B	80-89	3
C	70-79	2
D	60-69	1
F	0-59	0

Students must achieve a course grade of 70% ("C") in VET 106 to continue in the veterinary technology curriculum under the standard course sequence.

Required Textbook(s), including ISBN:

1. Colville T, Bassert JM. **Clinical Anatomy & Physiology for Veterinary Technicians**. 2nd ed. St. Louis: Mosby, 2008. ISBN: 9780323046855
2. Colville T, Bassert JM. **Clinical Anatomy & Physiology Laboratory Manual for Veterinary Technicians**. St. Louis: Mosby, 2009. ISBN: 9780323046848
3. Romich JA. **An Illustrated Guide to Veterinary Medical Terminology**. 3rd ed. Clifton Park, NY: Delmar, 2009. ISBN: 9781435420120
4. Kainer RA, McCracken TO. **Dog Anatomy: A Coloring Atlas**. Jackson, WY: Teton NewMedia, 2003. ISBN: 9781893441170
5. Green J. **Horse Anatomy**. Mineola, NY: Dover, 2006. ISBN: 0486448134
6. McCurnin DM, Bassert JM. **Clinical Textbook for Veterinary Technicians**, 7th ed. Philadelphia: W.B. Saunders, 2010. ISBN: 9781416057000
7. Dorland. **Dorland's Pocket Medical Dictionary**. 28th ed. Philadelphia: Saunders, 2008. ISBN: 9781416034209
8. Faculty. **VET 106: Animal Anatomy & Physiology Laboratory Manual**. Athens, GA: Published by the Authors.

Supplementary Material(s)/Recommended Textbooks:

1. **Hill's Atlas of Veterinary Clinical Anatomy**. Available at www.hillsvet.com
2. Pasquini C, Spurgeon T, Pasquini S. **Anatomy of Domestic Animals**. 10th ed. Pilot Point, TX: Sudz, 2003. ISBN: 0962311421
3. Lavin LM. **Radiography in Veterinary Technology**. 4th ed. Philadelphia: Saunders, 2007. ISBN: 9781416031895
4. McCracken TO, Kainer RA, Spurgeon TL. **Spurgeon's Color Atlas of Large Animal Anatomy**. Philadelphia: Lippincott Williams & Wilkins, 1999. ISBN: 9780683306736
5. McCracken TO, Kainer RA. **Color Atlas of Small Animal Anatomy**. Ames, IA: Blackwell, 2008. ISBN: 9780781743914
6. Kainer RA, McCracken TO. **Horse Anatomy: A Coloring Atlas**. 2nd ed. Crawford, CO: Alpine, 1998. ISBN: 9781577790174
7. **Dog Anatomy Flash Cards**. Orange, CA: Bryan Edwards Publishing, 2007. ISBN: 9781878576170

Required Equipment/Tools/Resources:

1. Nursing scrubs (top and bottom) and Laboratory coat (program-approved)
2. Clipboard
3. Colored pencils
4. Examination gloves (1 box of 100) – provided by the program

Instructional Technologies Employed:

The learning will occur through lecture, demonstration, hands-on laboratories, individual and group work. Other instructional methods may include: Discussion, questioning, drill, group work, papers, projects and on-line instruction/assessments. **Some laboratories will be held on the grounds of the College of Veterinary Medicine at The University of Georgia. Cadavers and other preserved and non-preserved tissues will be used. Students are required to attend all laboratory and clinical sessions and are expected to arrive on time. Students may be required to perform technical duties involved in the implementation of animal care and nursing during hours other than regularly scheduled laboratories.** Students will be required to assemble, clean, and replace all equipment, drugs, etc., used in the laboratory.

Independent study over and above the scheduled laboratory session is encouraged. New materials, and additional reading assignments, will be added as needed.

Attendance:

Regular class attendance is important and expected. The college considers both tardiness and early departure from class as forms of absenteeism. Students absent from class for any reason are still responsible for all work missed. Instructors have the right to determine whether work missed can be made up and have the liberty to set reasonable expectations for attendance.

Attendance at every scheduled lecture and laboratory session is considered necessary to obtain information and skills presented. Attendance will be monitored. Make up laboratories will not be given; late arrivals and/or failure to attend any session will result in a lower course score and may result in a lower course grade. Missing a laboratory or lecture session does not release the student from his/her responsibility for lecture or laboratory content. Students will be required to demonstrate clinical competencies normally obtained during the scheduled lecture or laboratory session at a time and location convenient to the faculty instructor(s) and animal resource facility. Failure to do so will result in a final course grade of "F".

Unannounced quizzes and/or in-class projects may be assigned at any time and will be utilized in the final course grade determination; students who are not present for such events will not receive credit for those assignments.

Tardiness will not be tolerated; repeat offenders will be asked not to join the class until after the current session has ended and the tardiness will be recorded as an absence.

All students are expected to be present at the start time of a scheduled test. Students not present at the start time of a scheduled test will be considered absent and will not be allowed to begin the test at a later time. **In general, there are NO excuses for missing an examination.** Illness severe enough to warrant missing an examination, or illness in which the student is absent for 3 or more days may need to be verified by written documentation. A grade of "zero" may be awarded for a missed examination without a satisfactory excuse. Validity of excuses for a student missing an unannounced quiz or in-class assignment will be left to the discretion of the instructors. Make-up examinations, when given for the rare approved case, may take the form of an essay or oral examination at the instructor's discretion.

Grading Policy and Criteria:

Components that will be used to assign Course Grades are as follows:

Exam 1	15%
Exam 2	15%
Exam 3	15%
Final Exam - Cumulative	15%
Laboratory Quizzes	15%
Laboratory Assessments	15%
<u>Laboratory Practical Examinations</u>	<u>10%</u>
TOTAL	100%

The course instructors reserve the right to administer unannounced quizzes at any time in the course that will be considered in the final course grade. With appropriate notice to the students, the course instructors reserve the right to alter the course guidelines if the need occurs.

Work Ethics:

To fulfill the responsibility to teach essential workplace ethics, the college evaluates program students on attendance, character, teamwork, appearance, attitude, productivity, organizational skills, communication, cooperation, and respect. Because students are preparing for employment, it is essential that they become accustomed to standards of behavior in the workplace. At the conclusion of the quarter, faculty members assign separate numerical work ethics grades which appear beside the course letter grades on both transcripts and grade reports. The work ethics grading scale is as follows: 3 (Exceeds Expectations), 2 (Meets Expectations), 1 (Needs Improvement), and 0 (Unacceptable).

Academic Honesty:

Academic honesty is expected at all times. Any student found to have engaged in academic misconduct such as cheating, plagiarism, or collusion is subject to disciplinary sanctions as outlined in the Student Code of Conduct detailed in the *ATC Catalog and Student Handbook*. The term “plagiarism” includes, but is not limited to, the use, by paraphrase or direct quotation, of the published or unpublished work of another person without full and clear acknowledgment. The term “collusion” includes, but is not limited to, the unauthorized collaboration with any other person in preparing work offered for academic credit. Students are advised that faculty routinely use **turnitin.com** both to prevent plagiarism and to assist in verifying when/if it has occurred.

Course Withdrawal:

Students may withdraw from a course without academic penalty until the midpoint of the quarter (as stated in the Academic Calendar published in the *ATC Catalog and Student Handbook*). By withdrawing before the midpoint of the quarter, the student is automatically assigned a grade of W, which does not affect quarterly or cumulative grade point average. Grades of W will affect satisfactory academic progress for financial aid purposes. **Students who stop attending class(es) without formally withdrawing risk earning a final grade of F, which will appear on the academic transcript.** Refer to the *ATC Catalog and Student Handbook* for further details.

Academic Support Center:

The Academic Support Centers of Athens Technical College (ATC) provide free tutoring for enrolled students. Both instructors and peer tutors provide tutoring in almost all subjects offered by the college. Information about the Center is accessible via the ATC website at www.athenstech.edu. To find out the specific services available on the Athens, Greene, and Walton Campuses, please call (706) 583-2839.

Americans with Disabilities Act:

Any student who believes he/she is eligible for accommodations in the classroom and/or during testing due to a documented disability is encouraged to contact the Director of Student Support Services at (706) 355-5081, or the Coordinator of Disability Services at (706) 355-5006, to apply for assistance. It is our goal at Athens Technical College to provide equal access to education for all students.

Cell Phones and Electronic Devices:

Students are strictly prohibited from using cell phones and personal electronic devices within college-owned/operated facilities without the explicit permission of a faculty or staff member.

Food/Drinks in Classroom:

Food and beverages are not allowed in classrooms or laboratories.

Warranty of Graduates:

The Department of Technical and Adult Education warrants every graduate of technical programs in which students may earn technical certificates of credit, diplomas, or associate degrees. The warranty guarantees that graduates demonstrate the knowledge and skills and can perform each competency as identified in the industry-validated standards established for every program of study. If one of our graduates educated under a standard program or his/her employer finds that the graduate is deficient in one or more competencies as defined in the course/program standards, Athens Technical College will re-train the employee at no instructional cost to the employee or the employer. This guarantee is in effect for two years after graduation.

TEACH Act:

According to the TEACH Act of 2002, Athens Technical College is obligated to advise you that instructional material included in this course may be subject to copyright protection. As such, you must not share, duplicate, transmit, or store the material of this course beyond the purpose and time frame explicitly stated in the syllabus of your course. If you are not certain whether a particular piece of material is covered by copyright protection, you should contact your instructor and obtain his/her written clarification. Failing to observe copyright protection is a violation of law.

VET 106 - Outline of Instruction; Lecture Series

Lecture	Subject	Reading Assignment
1	Introduction	Romich: Chapter 2 Colville: Chapter 1
2	Cell Structure	Colville: Chapter 3 (pp. 39-63)
3	Cell Physiology I	Colville: Chapter 3 (pp. 63-89) Lab Manual: pp. 51-54
4	Cell Physiology II	
5	Tissues I	Colville: Chapter 4
6	Tissues II	
7	Integument	Romich: Chapter 10 Colville: Chapter 5 Lab Manual : Chapter 5 Kainer : Plate 4, 5, 6
8	Skeletal I	Romich: Chapter 3 Colville: Chapter 6 Kainer : Plate 11
9	Skeletal II	
10	Skeletal III	
11	EXAM I: Cells, Tissues, Integument & Skeletal	
12	Muscular I	Romich: Chapter 3 Colville: Chapter 7
13	Muscular II	
14	The Nervous System	Romich: Chapter 13 Colville: 315-324
15	CNS & PNS	Colville: 324-328
16	Autonomic Nervous System Reflexes	Colville: 328-336
17	Sensory Organs I	Romich: Chapter 14 Colville: Chapter 14
18	Sensory Organs II	
19	CV Anatomy	Romich: Chapter 8 Colville: Chapter 8
20	CV Physiology	
21	EXAM II: Muscular, Nervous, Sensory & CV	
22	Blood/Lymphatics I	Romich: Chapter 15 Colville: 220-242
23	Blood/Lymphatics II	
24	Immune System	Romich: Chapter 15 Colville: 242-246
25	Respiratory I	Romich: Chapter 9 Colville: Chapter 10
26	Respiratory II	
27	GI I	Romich: Chapter 6 Colville: Chapter 11
28	GI II	
29	GI III	
30	Nutrients & Metabolism I	Colville: Chapter 12
31	Metabolism II	
32	EXAM III: Blood, Immune, Resp., GI & Metabolism	

33	Urinary I	Romich: Chapter 7 Colville: Chapter 16
34	Urinary II	
35	Endocrinology I	Romich: Chapter 11 Colville: Chapter 15
36	Endocrinology II	
37	Reproductive & Embryology I	Romich: Chapter 12 McCurnin: 370-381, 387, 389, 391, 393-395 Colville: Chapters 17 & 18 Lab Manual: pp. 54-56
38	Reproductive & Embryology II	
39	Reproductive & Embryology III	
40	TBA	
	CUMULATIVE FINAL EXAM	

VET 106 – Outline of Instruction; Laboratory Series

Lab #	Topic	Quiz	Post-Lab Assessment
1	PLANES & DIRECTIONAL TERMS EXTERNAL ANATOMY BODY CAVITIES & TOPOGRAPHY	No	Yes
2	MICROSCOPY CELL ANATOMY	Yes	Yes
3	HISTOLOGY AND TISSUES	Yes	Yes
4	SMALL ANIMAL SKELETAL	Yes	Yes
5	LARGE ANIMAL SKELETAL HORNS & HOOVES	Yes	Yes
6	RADIOGRAPHY OVERVIEW	No	No
7	MUSCULAR SYSTEM I RADIOGRAPHY I	Yes	Yes
8	MUSCULAR SYSTEM II RADIOGRAPHY II	Yes	Yes
9	MUSCULAR SYSTEM III RADIOGRAPHY III	Yes	Yes
10	JOINTS COMPARATIVE MUSCULOSKELETAL RADIOGRAPHY IV	Yes	No
11	PRACTICAL EXAM I	N/A	N/A
12	NERVOUS SYSTEM SENSORY SYSTEM	Yes	Yes
13	CARDIOVASCULAR SYSTEM	Yes	Yes
14	BLOOD LYMPHATIC SYSTEM	Yes	Yes
15	RESPIRATORY SYSTEM RADIOGRAPHY V	Yes	Yes
16	GASTROINTESTINAL SYSTEM	Yes	Yes
17	URINARY SYSTEM ENDOCRINE SYSTEM	Yes	Yes
18	REPRODUCTIVE SYSTEM RADIOGRAPHY VI	Yes	Yes
19	NECROPSY	No	No
20	PRACTICAL EXAM II	N/A	N/A