AN124

Animal Anatomy and Physiology

3 Credits

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Animal Anatomy and Physiology

Calendar Description

This course covers both gross and functional anatomy and physiology of farmed livestock species, using a systems approach, to assist students to understand how animals work, move, heal, and live.

Rationale

This is a required course for students in the Animal Science Technology diploma program. A basic understanding of animal anatomy and physiology is necessary for students to compliment principles in senior courses that emphasize the treatment of disease, nutrition, and animal production.

Prerequisites

None

Co-Requisites

None

Course Learning Outcomes

Upon successful completion of this course, students will be able to

1. define the basic vocabulary associated with general anatomy.
2. describe the structure and function of tissues.
3. name, locate and describe all bones in the common livestock species.
4. name, locate and describe the major muscle groups in common livestock species.
5. describe the structure and function of the integument and its related structures.
6. describe the digestive system and differentiate between species based on structure and function.
7. discuss and differentiate ruminant fermentation and structure and function of the rumen.
8. explain the pathway of blood travel through the cardiovascular system and all physiology involved.
9. discuss the role of the lymphatic system within the body.

10. discuss the form and function of the respiratory system in common livestock species.
11. describe the structure and function of the urinary system.
12. explain the central and peripheral nervous system, as well as action potentials.
13. explain how the endocrine system works and interacts with different parts of the body to maintain homeostasis.

Resource Materials

***Required Text*:**

Colville, T., & Bassert, J. M. (2008). *Clinical anatomy and physiology for Veterinary Technicians* (3rd ed.). St. Louis, Mo.: Mosby Elsevier.

Reference Texts:

Spurgeon, T., Kainer, R. & McCracken, T. (1999). *Spurgeons's color atlas of large animal anatomy*. Philadelphia: Lippincott, Williams & Wilkins.

Popesko, P. (1983). *Atlas of topographical anatomy of the domestic animals*. Philadelphia: W. B. Saunders Company.

Riegel, R., & Hakola, S. (1996). *Illustrated atlas of clinical equine anatomy and common disorders of the horse*. Marysville, Oh: Equistar Publications.

Conduct of Course

This course consists of approximately 42 lecture and 14 lab hours. Classroom instruction includes lectures and videos. Laboratory instruction includes hands-on learning of anatomical structures, and may include the dissection of mammals and the handling of large domestic animals. Students may be required to produce drawings of their observations, as well as answer questions following lab procedures.

Evaluation Procedures

A minimum mark of 50% is required in the lecture portion of this course.

Lecture Portion:

Midterm exam 1	20%
Midterm exam 2	20%
Final exam	20%
TOTAL	**60%**

A minimum mark of 50% is required in the laboratory portion of this course.

Lab Portion:

Lab questions	10%
Midterm	15%
Final lab exam	15%
TOTAL	**40%**

Missed Exams:

If, for any reason, a student is unable to write one of the scheduled exams, the weight of that exam is transferred to the Final Exam as long as the instructor is given at least one week notice prior to the exam. This is policy is also applied to exams missed due to illness as long as a doctor's note is provided. A "make-up" exam is not arranged.

Grade Equivalents and Course Pass Requirements

A minimum grade of D (50%) (1.00) is required to pass this course.

Letter	F	D	D+	C-	C	C+	B-	B	B+	A-	A	A+
Percent Range	0-49	50-52	53-56	57-59	60-64	65-69	70-74	75-79	80-84	85-89	90-94	95-100
Points	0.00	1.00	1.30	1.70	2.00	2.30	2.70	3.00	3.30	3.70	4.00	4.00

Students must maintain a cumulative grade of C (GPA - Grade Point Average of 2.00) in order to qualify to graduate.

Attendance

Classroom and laboratory attendance is considered vital to the learning process and as significant to the students' evaluation as examinations and reports.

a. Students having a combination of excused and/or unexcused absence of 20 percent or higher for the scheduled course hours will be required to withdraw and will automatically receive a "RW" (required withdrawal) for the course, regardless of any other evaluation results. (RW is a failing grade.)
b. An excused absence is one that is verified with your Instructor. Verification should be prior to the absence or the next class day following the absence. Verification of the absence may take the form of a note from your doctor/College nurse regarding illness, or a note from another Instructor regarding a field trip or other activity, or authorization by your Instructor. An unexcused absence is anything NOT verified by the instructor prior to the absence or the next class day following the absence.

NOTE: Any exceptions to the above attendance policy (e.g. timetable conflicts, work-related issues) must be approved in writing by the Department Chair prior to the beginning of the course.

It is the students' responsibility to know their own absentee record.

Normal hours are 8:30 a.m. to 6:30 p.m., with potential for evening courses, exams or extended field trips. Students are expected to be available for classes during these times.

Course Units/Topics

1. Introduction to Anatomy and Physiology
2. Tissues
3. Skeletal System
4. Muscular System
5. Integument and Related Structures
6. Digestive System
7. Ruminants
8. Cardiovascular System
9. Lymphatic System
10. Respiratory System
11. Urinary System
12. Nervous System
13. Endocrine System

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