



Course Descriptor VTMD192 Veterinary Physiology I Lab

Proposed Academic Year	2021 - 22	Last Reviewed Academic Year	2021
Course Code	VTMD192	Course Title	Veterinary Physiology I Lab
Credit hours	1	Level of study	Undergraduate
College / Centre	CAHS	Department	Vet. Medicine
Co-requisites	VTMD112	Pre-requisites	BIOL181

1. COURSE OUTLINE

This course is a general introduction to animal physiology, including the normal function of the cells, tissues and organs. The course will also cover the normal functions of the following systems: cardiovascular, digestive, and respiratory systems.

2. AIMS

This course introduces the students to the general concepts of animal physiology, the principles of homeostasis and of the homeostatic mechanisms. The students will have a thorough understanding about the functions of the organs of the body from macroscopic to molecular level. The ruminant digestive physiology (microbial & enzymatic) and avian digestion are also studied.

3. LEARNING OUTCOMES, TEACHING, LEARNING and ASSESSMENT METHODS

Learning Outcomes (Definitive)	Teaching and Learning methods (Indicative)	Assessment (Indicative)
Upon successful completion of this course, students will be able to:		
1. Demonstrate a good understanding with the principles and basic facts underlying animal physiology.	Lectures, lab work, discussion	Assignment, Work sheets and written examinations.
2. Explain the concept of homeostasis, including set point, negative and positive feedback loops, and compensatory responses.	Lectures, lab work, discussion	Work sheets and written examinations.
3. Acquire a detailed knowledge of organ-system physiology, with emphasis on cellular and molecular mechanisms in order to present a current view of physiological principles.	Lectures, lab work, discussion	Work sheets and written examinations.
4. Explain the structure and functions of biological membranes including the role of membrane proteins in catalysis, recognition, and transport.	Lectures, lab work, discussion	Quizzes, Work sheets and written examinations.



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4. ASSESSMENT WEIGHTING

Assessment	Percentage of final mark (%)
Assignment	20%
Lab reports	20%
Mid-term Examination	20%
Final Examination	40%
TOTAL	100%

5. ACHIEVING A PASS

Students will achieve **1** credit hours for this course by passing **ALL** of the course assessments [*Lab reports, Midterm exam and final examinations*] and achieving a **minimum overall score of 50%**

NB *Ensure that ALL learning outcomes are taken into account

6. COURSE CONTENT (Indicative)

General Introduction	
Hematological examination	
Collection and handling of blood samples.	
Types of blood samples.	
Anticoagulants.	
Sites of blood sampling in domestic animals	
Typing of Blood and cross matching test	
Counting of RBCs	
Erythrocyte sedimentation rate (ESR)	
Packed cell volume (PCV)	
Revision + Quiz III	
Hemoglobin estimation	
Counting of white blood cells	
Differential Leukocyte count	
Clinical Cases	
Counting of white blood cells	
TOTAL HOURS	45
Plus RECOMMENDED INDEPENDENT STUDY HOURS	15
TOTAL COURSE HOURS	60

7. RECOMMENDED REFERENCES

Core text/s:

- William O. Reece (Editor): Dukes` Physiology of Domestic Animals. 13th Edition.
- Harald Theml (Editor), Color Atlas of Hematology. 2nd Edition.
- B. Faye & M. Bengoumi (editors). Camel Clinical Biochemistry and Hematology.

Library + online resources:

Open Educational Resources: