



Course Descriptor VTMD282 Veterinary Physiology II Lab

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|-------------------------------|-----------|------------------------------------|-----------------------------|
| Proposed Academic Year | 2021 - 22 | Last Reviewed Academic Year | 2021 |
| Course Code | VTMD282 | Course Title | Veterinary Physiology 2 Lab |
| Credit hours | 1 | Level of study | Undergraduate |
| College / Centre | CAHS | Department | Vet. Medicine |
| Co-requisites | VTMD212 | Pre-requisites | VTMD192 |

1. COURSE OUTLINE

This course is the lab work of the theory course that will cover laboratory training on the normal function of the following body systems of different animal species: Nervous, urinary, special sense, endocrine & reproductive. Species differences and comparative physiology are being discuss.

2. AIMS

The course aims to give the students lab experience on the physiological concepts of different body systems and to know the use of instruments to measure and evaluate the function of the body systems.

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. Perform experiment on the function of skeletal muscle, including excitation-contraction coupling, sliding filament mechanism, force generation, and isometric versus isotonic contractions. | Lectures, lab work, discussion | Assignment, Work sheets and written examinations. |
| 2. Demonstrate an understanding of the functions of the male & female reproductive system, including reproduction in animals. | Lectures, lab work, discussion | Work sheets and written examinations. |
| 3. Explain the principles and functions of hormone action, including structure, mechanism of release from endocrine cell, mode of transport in blood, mechanism of action in target cells, and systemic effects of important hormones. | Lectures, lab work, discussion | Work sheets and written examinations. |
| 4. Analyze the structure and functions of the kidney nephrons, including glomerular filtration, tubular reabsorption, tubular secretion, and excretion | Lectures, lab work, discussion | Quizze, 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 examination*] and achieving a **minimum overall score of 50%**

NB *Ensure that ALL learning outcomes are taken into account

6. COURSE CONTENT (Indicative)

| | |
|-------------------------------------------------|-----------|
| 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 | |
| Packed cell volume (PCV) | |
| Urine analysis | |
| Rumen juice analysis | |
| Analysis of the cerebrospinal fluid | |
| Analysis of the synovial fluid | |
| TOTAL HOURS | 42 |
| Plus RECOMMENDED INDEPENDENT STUDY HOURS | 15 |
| TOTAL COURSE HOURS | 57 |

7. RECOMMENDED REFERENCES

Core text/s:

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

Library + online resources:

Open Educational Resources: