VT 212 : VETERINARY MICROBIOLOGY

Transcript title
Veterinary Microbiology

Credits
4

Grade mode
Standard letter grades

Contact hours total
60

Lecture hours
30

Lab hours
30

Prerequisites
VT 111, VT 112, VT 113 and VT 116.

Corequisites
VT 200, VT 201, VT 203, VT 209.

Description
Explores clinical microbiology and cytology as it relates to veterinary technology. Covers the basic principles of microbial classification, growth, and pathogenicity as well as various laboratory methods used in identification of microorganisms.

Learning outcomes
1. Explain basic principles of microbial classification, growth, and pathogenicity.
2. Identify common animal pathogens and describe their associated diseases.
3. Explain immunological responses to and methods to combat pathogenic microbes.
4. Explain and perform culture and sensitivity testing for identification of microbes and appropriate microbial therapy.
5. Explain and perform staining procedures for identification of microbes.
6. Explain and perform culture and identification of common dermatophytes.
7. Explain and perform cytologic evaluation of ear and vaginal samples.

Content outline
Lecture
I. Intro to Pathogens
II. Bacteria: morphology, staining, and sample collection
III. Bacteria: anatomy, metabolism, and genetics
IV. Bacterial pathogens and virulence; Gram+ pathogens
V. Gram+ pathogens
VI. Antibiotic sensitivity testing and antimicrobial drugs
VII. Fungi: description, diagnosis
VIII. Viruses and virus isolation
IX. Viral diseases
X. Serologic and PCR tests
XI. Cytology – sample collection, smears, evaluation
Lab
I. Gram stain; Inoculation of culture media
II. Gram stain; Streak plating for isolation of colonies
III. Gram stain; Pure culture; Tests for identification
IV. Tests for identification
V. Antibiotic sensitivity testing; Urine culture
VI. Fungi
VII. Preparing samples for submission
VIII. Cytology

Required materials
Textbook, lab manual, and a white lab coat.

Grading methods
Assessment may include weekly homework assignments, quizzes, lab project, and lecture and lab exams.