

**STATE UNIVERSITY OF NEW YORK
COLLEGE OF TECHNOLOGY
CANTON, NEW YORK**



COURSE OUTLINE

VSCT 207 – HEALTH AND DISEASE OF FARM ANIMALS

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**SCHOOL OF SCIENCE, HEALTH AND CRIMINAL JUSTICE
VETERINARY SCIENCE TECHNOLOGY
AUGUST 2018**

- A. **TITLE:** Health and Disease of Farm Animals
- B. **COURSE NUMBER:** VSCT 207
- C. **CREDIT HOURS:** 3
- D. **WRITING INTENSIVE COURSE:** No
- E. **COURSE LENGTH:** 15 weeks
- F. **SEMESTER(S) OFFERED:** fall
- G. **HOURS OF LECTURE, LABORATORY, RECITATION, TUTORIAL, ACTIVITY:**
3 lecture hours per week

H. CATALOG DESCRIPTION:

This course is designed to acquaint students with the most common infectious and non-infectious diseases of cattle, horses, sheep, goats and swine. The causative agent of these diseases will be identified and emphasis will be placed on the care of the animal and the prevention of the disease. Basic discussion of immunology and vaccination theory is also included as well as proper husbandry of these animals and how this relates to the wellbeing of these animals. Diseases of public health importance and zoonotic potential are also included.

I. PRE-REQUISITES/CO-REQUISITES:

- a. Pre-requisite(s): Enrollment in Veterinary Technology (2278) or Veterinary Science Technology (521) and BIOL 150
- b. Co-requisite(s): none

J. GOALS (STUDENT LEARNING OUTCOMES):

By the end of this course, the student will be able to:

<i>Course Objective</i>	<i>Institutional SLO</i>
a. Discuss the basic concept and mechanism of immunology and the theory of vaccination	5. Industry, Professional, Discipline-Specific Knowledge and Skills
b. List and discuss common diseases of farm animals	5. Industry, Professional, Discipline-Specific Knowledge and Skills
c. Discuss sanitation, nutrition and housing as it relates to animal health	5. Industry, Professional, Discipline-Specific Knowledge and Skills
d. Discuss the role of both veterinary personnel and the producer in implementing the prevention and/or control of the discussed diseases.	5. Industry, Professional, Discipline-Specific Knowledge and Skills

K. **TEXTS:** none

L. **REFERENCES:**

Keeping Livestock Healthy, Haynes. Storey Communications, Inc., Pownal, VT

M. **EQUIPMENT:** none

N. **GRADING METHOD:** A-F

O. **MEASUREMENT CRITERIA/METHODS:**

- Exams
- Quizzes

P. **DETAILED COURSE OUTLINE:**

I. Disease Prevention/Treatment

- A. Define biosecurity and discuss its importance
- B. Vocabulary of Disease

II. Basic Immunity

- A. Discuss possible outcomes when a disease meets its host
- B. Discuss natural barriers of disease
- C. Discuss specific barriers of diseases and antibodies
- D. Discuss properties of a good antigen
- E. Describe the events of the immune reaction and antibody production
- F. Define active and passive immunity
- G. Define titer and discuss methods of obtaining a titer

III. Vaccines

- A. Discuss the history of vaccines
- B. Describe the qualities of an ideal vaccine
- C. Define attenuation and discuss the levels of attenuation
- D. Discuss the need for an adjuvant
- E. Discuss types of vaccines and administration
- F. Define and discuss anaphylactic reactions

IV. Sanitation

- A. Discuss the steps in sanitation and disinfection
- B. List and explain the uses for common chemical disinfectant used in the animal industry

V. Housing

A. Discuss the following as it relates to animal management and comfort: space, flooring, bedding, lighting, exercise areas, ventilation

VI. Nutrition

- A. Discuss animal's basic needs of water, energy, and protein
- B. Discuss major minerals and problems that may occur from either excess or deficiency
- C. Discuss required vitamins and problems that may occur from either excess or deficiency

VII. Diseases of Cattle

- A. Define mastitis, discuss pathogenesis, signs, and control of the following:

mastitis causing organisms, *Streptococcus agalactiae*, *Escherichia coli*, *Staphylococcus aureus*, *Streptococcus species*

- B. Define respiratory disease and discuss pathogenesis, signs, and control of the following diseases: IBR, PI3, BRSV, Pasteurellosis
 - C. Discuss pathogenesis, signs, and control of the following metabolic diseases: parturient paresis, hypomagnesemia, ketosis, displaced abomasum, and traumatic reticulitis
 - D. Discuss pathogenesis, signs, and control of the following diseases: calf diarrhea, *Escherichia coli*, Rota virus, Corona virus, adult diarrhea, winter dysentery, Johne's disease, BVD
 - E. Discuss pathogenesis, signs, and control of listeriosis, bovine leukosis
- VIII. Diseases of Horses
- A. Discuss pathogenesis, signs, and control of the following diseases:
respiratory: equine influenza, equine rhinopneumonitis, heaves, strangles;
GI disease: colic, Potomac horse fever; metabolic: azoturia, laminitis;
CNS disease: equine encephalomyelitis, tetanus, West Nile virus, EPM
- IX. Diseases of Sheep and Goats
- A. Discuss pathogenesis, signs, and control of the following diseases:
enterotoxemia, pregnancy toxemia, caseous lymphadenitis, contagious ecthyma, CAE, foot rot, scrape, and BSE
- X. Diseases of Pigs
- A. Discuss pathogenesis, signs, and control of the following diseases: salt poisoning, MMA, gastric ulcers and trichinosis
- XI. Zoonotic Diseases
- A. Discuss pathogenesis, signs and control of the following diseases:
salmonellosis, dermatophytosis, toxoplasmosis, tuberculosis, brucellosis, leptospirosis, Lyme disease and rabies.

Q. LABORATORY OUTLINE: NA