

# VT-2520: ANIMAL HEALTH AND DISEASE

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## Cuyahoga Community College

**Viewing: VT-2520 : Animal Health and Disease**

**Board of Trustees:**

1/30/2025

**Academic Term:**

Fall 2025

**Subject Code**

VT - Veterinary Technology

**Course Number:**

2520

**Title:**

Animal Health and Disease

**Catalog Description:**

Physiological systems approach to the most frequently encountered diseases and clinical problems of companion animals, horses and production animals, including disease names, definition and history, animals at risk, causes and signs, diagnosis, treatment and prevention.

**Credit Hour(s):**

3

**Lecture Hour(s):**

3

## Requisites

**Prerequisite and Corequisite**

VT-2300 Pharmacology for Veterinary Technicians, and departmental approval: admission to the program.

## Outcomes

**Course Outcome(s):**

Recognize and respond to the presence of the zoonotic or biologically significant infectious diseases that are most likely to be encountered in companion animal and large animal medicine.

**Objective(s):**

1. Identify diseases that are reportable to local, state and/or federal authorities.
2. Explain what personal protective equipment (PPE) and biosecurity protocols may be needed for handling an animal with a given infectious disease.
3. Describe any special animal or diagnostic specimen handling needs for a given disease, including what specimens may be submitted for analysis.

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**Course Outcome(s):**

Recognize the common diseases and disorders of the dog, cat, horse, cow, sheep, and pig; be able to coordinate patient care and provide client education about the conditions.

**Objective(s):**

1. Describe the causes and clinical signs of common medical problems seen in companion and large animal species.
2. Describe the treatments frequently used for commonly encountered medical problems of our companion and large animal species and potential outcomes of treatment or failure to treat.
3. Explain what animal parameters should be monitored for a given condition and at what point a veterinarian should be notified.
4. Explain what a client would need to understand in order to successfully manage a given condition in their animal.
5. For medical conditions in which dietary modification may be a part of the treatment plan for an animal, explain what those dietary modifications would be and why they would be employed.

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**Course Outcome(s):**

Identify what animals are at the greatest risk for acquiring infectious diseases, what diseases they are at risk for and how these diseases might be prevented.

**Objective(s):**

1. Explain the selective use of vaccines and medications that may occur in food animal production situations.
  2. Identify risk factors for acquiring infectious disease (e.g., travel, additions to the herd) and explain how these risks can be mitigated.
  3. Describe the diseases of dogs, cats, horses, cows, sheep, and pigs that are routinely preventable by vaccination and the vaccination protocols that would be utilized.
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**Methods of Evaluation:**

1. Quizzes
2. Unit lecture examinations
3. Comprehensive final examination
4. Homework assignments
5. Case studies
6. Journal article reviews
7. Research papers

**Course Content Outline:**

1. Obtaining a good patient/herd history
2. Review of the physical examination
3. Principles of vaccination and proper care of vaccines
4. Common canine diseases preventable by vaccination
  - a. Canine distemper
  - b. Infectious canine hepatitis
  - c. Leptospirosis
  - d. Canine kennel cough complex
  - e. Canine influenza
  - f. Parvovirus
  - g. Lyme disease
5. Common feline diseases preventable by vaccination
  - a. Feline viral rhinotracheitis
  - b. Feline calicivirus
  - c. Feline pneumonitis
  - d. Feline panleukopenia
  - e. Feline leukemia
  - f. Feline infectious peritonitis
  - g. Feline immunodeficiency virus
6. Common equine diseases preventable by vaccination
  - a. Influenza
  - b. Viral encephalitides (Eastern, Western and Venezuelan equine encephalomyelitis)
  - c. Rhinopneumonitis
  - d. Equine viral arteritis
  - e. Strangles
  - f. Potomac horse fever
  - g. West Nile virus
7. Bovine diseases preventable by vaccination
  - a. Infectious bovine rhinotracheitis (IBR)
  - b. Bovine virus diarrhea (BVD)
  - c. Bovine syncytial virus
  - d. Bovine parainfluenza virus
8. Other diseases prevented by vaccination

- a. Tetanus (equine and ruminant)
  - b. Rabies
- 9. Other notable infectious diseases of large animals
  - a. Equine infectious anemia (EIA)
  - b. Johne's disease (cattle)
  - c. Contagious ecthyma (sheep and goats)
  - d. Foot and mouth disease
  - e. Caseous lymphadenitis (sheep)
  - f. Caprine arthritis-encephalitis (CAE)
  - g. Erysipelas of swine
  - h. Transmissible gastroenteritis (TGE) (swine)
  - i. Atrophic rhinitis (swine)
  - j. Swine dysentery
  - k. Avian influenza
- 10. Clinical conditions of the urinary system
  - a. Urinary incontinence versus submissive urination
  - b. Feline lower urinary tract syndrome
  - c. Cystitis
  - d. Uroliths
  - e. Kidney disease in the dog and cat
- 11. Clinical conditions of the reproductive system
  - a. Brucellosis (ruminant and canine)
  - b. Male
    - i. Cryptorchidism
    - ii. Prostatic problems
    - iii. Testicular problems
    - iv. Penile problems
  - c. Female
    - i. Birth control
    - ii. Parturition
    - iii. Mastitis
    - iv. Pseudopregnancy
    - v. Pyometra
- 12. Clinical conditions of the gastrointestinal system
  - a. Pancreas
  - b. Diarrhea
  - c. Small bowel
  - d. Large bowel
  - e. Inflammatory bowel disease
  - f. Hemorrhagic gastroenteritis
  - g. Liver disease
  - h. Salmonella (equine and food animal)
  - i. Actinobacillosis: "wooden tongue" (cattle)
  - j. Actinomycosis: "lumpy jaw" (cattle)
- 13. Clinical conditions of the integumentary system
  - a. Pyoderma
  - b. Allergic problems
  - c. Proud flesh
  - d. Equine sarcoids and warts
- 14. Special senses
  - a. Eye
    - i. Common ocular tests
    - ii. Clinical problems associated with tears
    - iii. Conjunctivitis and corneal problems
    - iv. Disorders of the palpebrae
    - v. Cataracts and lenticular sclerosis
    - vi. Glaucoma and uveitis
    - vii. Ocular emergencies

- viii. Infectious bovine keratoconjunctivitis: "pink eye"
- ix. Ear
  - 1. Otitis
- 15. Clinical conditions of the endocrine system
  - a. Thyroid disorders
  - b. Hyperthyroidism
  - c. Hypothyroidism
  - d. Diabetes mellitus and insipidus
  - e. Addison's and Cushing's diseases
- 16. Clinical conditions of the respiratory system
  - a. Diaphragmatic hernia
  - b. Feline asthma
  - c. Tracheal collapse
  - d. Choke
  - e. Guttural pouch disease
  - f. Chronic obstructive pulmonary disease (COPD)
  - g. Laryngeal paralysis
  - h. Bovine respiratory disease complex: "shipping fever"
- 17. Clinical conditions of the nervous system
  - a. Seizures
  - b. Paralysis and paresis
- 18. Clinical conditions of the cardiovascular system
  - a. Heart murmurs
  - b. Heart failure
  - c. Feline hypertrophic cardiomyopathy
  - d. Traumatic reticulopericarditis: "hardware disease"(cattle)
- 19. Clinical conditions of the skeletal system
  - a. Hip/elbow dysplasia
  - b. Cranial cruciate ligament rupture
  - c. Developmental orthopedic disease (DOD)
  - d. Degenerative joint disease (arthritis)

## Resources

Nelson, Richard W., and C. Guillermo Couto. *Small Animal Internal Medicine*. 6th ed. St. Louis, MO: Elsevier Mosby, 2019.

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Pugh, D.G., and A.N. Baird. *Sheep and Goat Medicine*. 3rd ed. Maryland Heights, MO: Elsevier Saunders, 2021.

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Scott, Phillip R., et al. *Cattle Medicine*. 1st ed. London, UK: Manson Publishing, Ltd., 2011.

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Smith, Bradford P. *Large Animal Internal Medicine*. 6th ed.,. St. Louis, MO: Elsevier Mosby, 2019.

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Tilley, Larry P., and Francis W.K. Smith Jr. *Blackwell's Five-Minute Veterinary Consult: Canine and Feline*. 6th ed. Ames, IA: John Wiley & Sons, 2016.

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Bassett, Joanna M., et al., editors. *McCurnin's Clinical Textbook for Veterinary Technicians and Nurses*. 10th ed. St. Louis, MO: Elsevier, 2022.

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## Resources Other

JAVMA (Journal of the American Veterinary Medical Association), monthly peer-reviewed periodical, Schaumburg, IL.

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