

## Clinical Neurology for Companion Animals

VetICE Clinical Neurology is a one credit (15 hours) course that uses a variety of instructional methods including: required background reading, lecture presentations, interactive cases, and case stories. Students practice clinical neurology as they are introduced to many patients throughout the course. The cases include a great deal of expert modeling and feedback on the choices that students make. The course is organized into 9 units meant to be taken in order. The specific activities and approximate completion times for each unit are shown in the diagram below.

### Learning Objectives for the Course

Upon completing this course students will be able to:

- determine if a patient has a neurological problem;
- localize lesions in the main areas of the nervous system;
- establish a practical list of differential diagnosis;
- formulate a proper diagnostic plan; and
- recommend appropriate therapy of neurologic diseases.

#### **Unit 1: The Neurologic Examination**

Required Reading  
Lecture/presentation  
Case: Mac parts 1 & 2  
Case: Butchie parts 1 & 2  
Graded quiz

#### Unit Objectives

- Perform a neurologic examination; and
- Verify the presence or absence of a neurologic dysfunction.

2 hrs

#### **Unit 2: Neuroanatomic Localization**

Required Reading  
Lecture/presentation  
Case: Butchie part 3  
Case: Smudge part 1,2, 3  
Case: Mocha part 1, 2, 3  
Graded quiz

- Utilize the findings from the neurologic exam to localize lesions as being either neuromuscular, spinal cord, or brain.

2 hrs

#### **Unit 3: Overview of Differential Diagnoses**

Lecture/presentation  
Graded quiz

- Discuss the different types of diagnoses relevant to neurology.

.5 hrs

#### **Unit 4: Diagnosing Brain Lesions**

Required Reading  
Case: Butchie part 4 & 5  
Case: Angie parts 1-5

- Localize a lesion in the main areas of the brain;
- Distinguish between focal and diffuse encephalopathy;
- Establish a practical list of differential diagnoses;
- Recognize and treat elevated intracranial pressure;
- Describe diagnostic techniques that are available for diagnosing intracranial disease; and
- Recommend appropriate therapy for brain diseases.

2 hrs

### Unit 5: Vestibular Diseases

Required Reading  
Case: Sadie parts 1-5  
Case: Ellie parts 1-5  
Case: Shep parts 1-5

- Describe basic vestibular anatomy;
- Discuss clinical signs of vestibular disease;
- Localize vestibular lesions as central or peripheral and right or left sided; and
- List differential diagnoses for vestibular disease.

2 hrs

### Unit 6: Seizures

Required Reading  
Case: Fiona parts 1-5  
Case: Gogo parts 1-5

- Recognize and describe typical seizure activity;
- List differential diagnoses for seizures;
- Treat seizures in an emergency setting; and
- Manage seizures over the long term.

1 hrs

### Unit 7: Diagnosing Spinal Cord and Cauda Equina Lesions

Required Readings (2)  
Case: Smudge parts 4 & 5  
Case: Lily parts 1-5  
Case: Baron parts 1-5  
Case: Kaiser parts 1-5  
Case: Princess parts 1-5  
Case: Freddie parts 1-5

- Determine if a patient has a neurological problem located to the spinal cord (myelopathy) or the cauda equina;
- Localize the lesion in the main areas of the spinal cord and cauda equina;
- Establish a practical list of differential diagnoses;
- Formulate a proper diagnostic plan; and
- Recommend appropriate therapy for spinal cord diseases and cauda equina syndrome.

3 hrs

### Unit 8: Diagnosing Neuromuscular Disorders

Required Readings  
Case: Mocha parts 4 & 5  
Case: Jake parts 1-5  
Case: Rainey parts 1-5  
Case: Shoshi parts 1-5  
Case: B.B. parts 1-5

- Recognize the presence of neuromuscular disease in the clinical patient;
- Describe the application and interpretation of diagnostic procedures used in the diagnosis of neuromuscular disorders;
- Describe the etiology and pathogenesis, clinical signs, diagnosis and treatment of the most common neuromuscular disorders in the dog and cat; and
- Recognize differences between neuropathy, myopathy and neuromuscular junction diseases.

2 hrs

### Unit 9: Finals

Final examination  
Graded Case: Virgil  
Graded Case: Bailey Wick  
Graded Case: Caramel

Throughout the course students will have completed many practice cases. In this final unit, students complete 3 graded cases and a final exam.

1 hrs

## Additional Faculty Resources

Teaching Guide

Access to Vet ICE Content Experts