

Health, Welfare, and Diseases of Shelter Animals Syllabus (APBI 490) Section 202

Introduction to canine/feline health and welfare, and diseases in the shelter setting. Pathophysiology, diagnosis, management, prevention, and treatment of diseases; practical clinical applications to shelter management. The focus will be on diseases that are commonly seen in western Canada.

Course Description:

This course aims to provide an overview of canine and feline infectious diseases that are commonly encountered in animal shelters. It provides an introduction to the problem-oriented medical record system (POMR), clinical signs, diagnosis, and treatment of disease. It also introduces epidemiology and population-based health, and encourages a critical eye when evaluating husbandry practices.

The relationship between animal welfare and disease will be examined from both a clinical and practical approach.

Case-based discussions and problem-based learning are a crucial part of the course. This will allow students to use the clinical knowledge and skills they have gained and apply it practically to real-life cases.

This course is designed for students with intent to pursue a career in veterinary medicine, students interested in post-graduate animal welfare research, and students with an interest in the animal care community.

Course Details:

Instructor: Alex Boo, BSc. (Hons), D.V.M

Location: Orchard Commons Room 4052

Time: Mondays 13:00- 16:00

Teaching assistant: There is no teaching assistant for this course

Office hours: There are no structured, scheduled office hours. Students are encouraged to contact the instructor directly through email with any questions.

Textbook: no required textbook material needed. All information will be provided through lecture notes and assigned readings.

Learning Outcomes:

Upon completion of this course, students will be able to:

- understand the importance of early monitoring, stress management and housing management in the prevention and treatment of disease in the shelter setting
- use the problem oriented medicine approach to present a clinical case and understand its role in diagnosis and patient management
- be able to recognize and describe common clinical signs, diagnoses, and evidence-based treatment methods for common diseases in felines and canines in the shelter setting
- compare the components of a complete and nutritionally balanced diet in canines and felines and its importance in disease management

- understand the term “zoonoses” and its role in shelter animal health, and in a broader setting in global animal health
- explain the link between human, animal, and ecosystem health
- critically summarize and review an infectious disease of their choosing not covered in lecture

Materials and Assessment:

- majority lecture-based course with time allocated for (25%) practical case-based discussion

Guided tour of a local animal shelter with patient assessment and critical analysis (5% of total grade)

- Students are expected to attend the animal shelter tour and complete the worksheet provided.
- Students who are unable to attend are expected to organize an alternative method of evaluation with the instructor.

Term assignment (15% of total grade)

- Critically summarize and review an infectious disease of choice, not covered in lecture; examples include and are not limited to: canine/feline Rabies, Leptospirosis, Lyme disease, and Heartworm disease
- Components include signalment, clinical signs, pathophysiology, physical exam signs, diagnostics helpful to diagnose the disease, treatment options and prognosis.
- Word limit: 500 words maximum, diagrams optional (not included in word count).

Midterm (30% of total grade)

- A multiple choice, true/false, and short answer midterm will be scheduled halfway through the term on the material covered in lecture.

Final Exam (40% of total grade)

- A final exam comprising of material from the midterm onwards.
 - Multiple choice, short answer, and case based long –answer questions
 - Breakdown of final exam may change depending on material covered

Participation (10% of total grade)

- Students are expected to participate in the case-based discussion portions (in-class) to supplement and support problem-based learning.

	Points
Animal shelter tour assignment	5
Term Assignment	15
Midterm	30
Final Exam	40
Participation	10
	Total: 100

A sample lecture schedule is summarized below for (Monday Jan 10- Monday April 4)

-lecture topics may change depending on final decision of instructor.

Lecture	Topic	Reading
Introduction		
1	Introduction, expectations, and how does disease apply in the framework of animal welfare? <ul style="list-style-type: none"> Feline idiopathic cystitis 	Fraser, D. Understanding animal welfare: the science in its cultural context Ames, Iowa: Wiley-Blackwell.
2a	Three aims of infection control: host susceptibility, optimizing ability to resist diseases, and decreasing exposure to pathogens	Miller, L., & Zawistowski, S. (2013). <i>Shelter medicine for veterinarians and staff</i> . 2 nd ed. Ames, Iowa: Wiley-Blackwell.
2b	Epidemiology -Agent, Host, and Environmental Determinants of disease	Miller, L., & Zawistowski, S. (2013). <i>Shelter medicine for veterinarians and staff</i> . 2 nd ed. Ames, Iowa: Wiley-Blackwell.
3	Problem Oriented Medicine Approach	Lorenz, M. D. (2009). The problem-oriented approach. <i>Small animal medical diagnosis</i> ,
4	Nutrition: the fifth vital assessment	Freeman, L., Becvarova, I., Cave, N., MacKay, C., Nguyen, P., Rama, B., Takashima, G., Tiffin, R., van Beukelen, P., & Yathiraj, S. (2011). WSAVA Nutritional Assessment Guidelines. <i>Journal of Feline Medicine and Surgery</i> , 13(7), 516–525.
Gastrointestinal Disease		
5	Canine Viral Gastrointestinal Disease	Miller, L., & Zawistowski, S. (2013). <i>Shelter medicine for veterinarians and staff</i> . 2 nd ed.

	-Canine Parvovirus -Canine Distemper virus	Ames, Iowa: Wiley-Blackwell. Miller, L. (2021). <i>Infectious disease management in animal shelters</i> . Hoboken, New Jersey: Wiley Blackwell.
6	Feline Viral Gastrointestinal Disease -Feline Enteric Coronavirus, Feline infectious peritonitis -Feline panleukopenia virus	Miller, L., & Zawistowski, S. (2013). <i>Shelter medicine for veterinarians and staff</i> . 2 nd ed. Ames, Iowa: Wiley-Blackwell. Miller, L. (2021). <i>Infectious disease management in animal shelters</i> . Hoboken, New Jersey: Wiley Blackwell.
7	Parasites (both dogs and cats) Campylobacter, Clostridium, Salmonella, Cryptosporidium, Isospora, Toxoplasma, Tritrichomonas foetus, Nematodes	Raza, A., Rand, J., Qamar, A., Jabbar, A., & Kopp, S. (2018). Gastrointestinal Parasites in Shelter Dogs: Occurrence, Pathology, Treatment and Risk to Shelter Workers. <i>Animals</i> , 8(7), 108. doi:10.3390/ani8070108
Respiratory Disease		
8	Canine Respiratory Disease -Canine Infectious Respiratory Disease Complex -Canine Distemper Virus -Canine Influenza Virus	Miller, L., & Zawistowski, S. (2013). <i>Shelter medicine for veterinarians and staff</i> . 2 nd ed. Ames, Iowa: Wiley-Blackwell. Miller, L. (2021). <i>Infectious disease management in animal shelters</i> . Hoboken, New Jersey: Wiley Blackwell.
9	Feline Respiratory Disease -Feline Calicivirus -Feline Herpesvirus -Chlamydia felis	Miller, L., & Zawistowski, S. (2013). <i>Shelter medicine for veterinarians and staff</i> . 2 nd ed. Ames, Iowa: Wiley-Blackwell. Miller, L. (2021). <i>Infectious disease management in animal shelters</i> . Hoboken, New Jersey: Wiley Blackwell.

	-Mycoplasma	
Dermatological Disease		
10	External Parasites: Sarcoptic Mange Demodectic Mange Dermatophytosis Fleas Ticks Ear mites	Miller, L., & Zawistowski, S. (2013). <i>Shelter medicine for veterinarians and staff</i> . 2 nd ed. Ames, Iowa: Wiley-Blackwell. Miller, L. (2021). <i>Infectious disease management in animal shelters</i> . Hoboken, New Jersey: Wiley Blackwell.
Feline Retrovirus		
11	Feline immunodeficiency virus Feline Leukemia virus	Little, S., Levy, J., Hartmann, K., Hofmann-Lehmann, R., Hosie, M., Olah, G., & Denis, K. S. (2020). 2020 AAFP Feline Retrovirus Testing and Management Guidelines. <i>Journal of Feline Medicine and Surgery</i> , 22(1), 5–30. https://doi.org/10.1177/1098612X19895940
Zoonoses		
12	One health – the link between human and animal health	Destoumieux-Garzón, D., Mavingui, P., Boetsch, G., Boissier, J., Darriet, F., Duboz, P., Fritsch, C., Giraudoux, P., Le Roux, F., Morand, S., Paillard, C., Pontier, D., Sueur, C., & Voituron, Y. (2018). The One Health Concept: 10 Years Old and a Long Road Ahead. <i>Frontiers in veterinary science</i> , 5, 14. https://doi.org/10.3389/fvets.2018.00014
13	Zoonotic infections -COVID-19 and cats	Miller, L., & Zawistowski, S. (2013). <i>Shelter medicine for veterinarians and staff</i> . 2 nd ed. Ames, Iowa: Wiley-Blackwell. Patterson, E.I., Elia, G., Grassi, A. <i>et al</i> . Evidence of exposure to SARS-CoV-2 in cats and dogs from households in Italy. <i>Nat Commun</i> 11 , 6231 (2020). https://doi.org/10.1038/s41467-020-20097-0