



VETM*3410 Health Management II

Fall 2019

Section(s): C01

Department of Population Medicine

Credit Weight: 0.75

Version 1.00 - July 05, 2019

1 Course Details

1.1 Calendar Description

This course is a continuation of the Phase 1 course Health Management I. Previously presented concepts will be explored in greater depth and complexity. Additional emphasis will be placed on relevant epidemiological tools for monitoring, outbreak investigation, critical appraisal and the applications of principles from the previous course in the series to measure performance, including relevant production genetics, and animal behaviour in a species/industry context.

Pre-Requisites: All Phase 1 courses.

Co-Requisites: All Phase 2 courses.

1.2 Course Description

Previously presented concepts will be explored in greater depth and complexity and new material will address three main themes: evidence-based decision making, animal behaviour and welfare, and one health.

Emphasis will be placed on relevant epidemiological tools for understanding disease causation, evidence-based medicine and critical appraisal of the literature, surveillance, and outbreak investigation. Animal behaviour, and animal welfare issues, will be presented in a species/industry context. The one health section will focus on regulatory matters, food safety, and zoonotic disease issues.

Health Management: Definition

Health management is the promotion of health and prevention of disease in animals within the economic / business framework of the animal owner / industry, while addressing issues of animal welfare, human safety and environmental impact.

Course Overview

The course will present information and promote the development of skills and attitudes necessary to understand and effectively deal with health management and population health issues in greater depth. The course has three main units, within which there are several subsections:

1. Evidence-Based Decision Making

A. Evidence-based Veterinary Medicine in the context of:

- a. Diagnostic process
- b. Treatment decisions
- c. Preventive programs

B. Surveillance

C. Outbreak Investigation

2. Animal Behaviour and Welfare

A. Clinical Animal Behaviour

B. Animal Welfare

3. One Health

1.3 Timetable

The course timetable is subject to change. Please see WebAdvisor for the latest information.

1.4 Final Exam

Exam time and location is subject to change. Please see WebAdvisor for the latest information.

2 Instructional Support

Administrative Information

For questions regarding academic consideration, continuation of study, academic misconduct, safety, confidentiality, and experiential learning involving use of animals, please refer to the Phase information on the OVC website.

2.1 Instructional Support Team

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3 Learning Resources

Students who wish to explore related areas of interest beyond the scope of this course should see the course instructor(s) regarding opportunities and further recommended resources.

3.1 Recommended Resources

Assigned Reading (Readings)

Printed notes and reading material will not be provided. Reading material (journal articles, texts, etc.) will be placed on reserve in the OVC library or posted on the D2L course website for students who wish to obtain the material independently.

Handbook of Evidence-Based Veterinary Medicine (Textbook)

The text entitled "Handbook of Evidence-Based Veterinary Medicine" by Peter Cockcroft and Mark Holmes, published by Blackwell Publishing (ISBN 1-4051-0890-8) is recommended for the evidence-based decision making section of the course.

The Ethology of Domestic Animals: An Introductory Text (Textbook)

The text entitled "The Ethology of Domestic Animals: An Introductory Text" Third Edition (2017) by Per Jensen, published by CABI Publishing (ISBN 9781786391650) is recommended for the animal behaviour and welfare sections of the course.

3.2 Additional Resources

D2L (Website)

The Health Management II D2L site may be reached via the OVC website. This site will contain lecture notes and lecture slides, links to other useful material, references for assigned readings, as well as assignments.

4 Learning Outcomes

4.1 Course Learning Outcomes

By the end of this course, you should be able to:

1. Define the term 'evidence-based veterinary medicine' and explain the strategies involved in the practice of evidence-based medicine (Evidence-Based Decision Making - Evidence-Based Veterinary Medicine).
2. Interpret the results of diagnostic tests and use these data appropriately when making decisions about a case. Describe the appropriate use of diagnostic tests and their roles in both quantitative and subjective clinical assessment. This includes knowing how to use sensitivity / specificity, pre- / post-test probability of disease, predictive values, likelihood ratios and the measurement and improvement of agreement in the diagnostic process (Evidence-Based Decision Making - Evidence-Based Veterinary Medicine).
3. Explain the value of clinical trials in the development of evidence-based treatment options (Evidence-Based Decision Making - Evidence-Based Veterinary Medicine).

4. Critically appraise scientific literature to weigh evidence on opposing views (Evidence-Based Decision Making - Evidence-Based Veterinary Medicine).
5. Explain how causal reasoning is utilized to assess risk and the association between factors and health outcomes in evidence-based prevention programs (Evidence-Based Decision Making - Evidence-Based Veterinary Medicine).
6. Compare and contrast the methods of infectious disease control (Evidence-Based Decision Making - Infectious Disease Control and Surveillance).
7. Explain health monitoring and surveillance at the individual, local and higher population levels.

- Explain and describe the role of health and/or disease monitoring systems in the context of clinical practice and health management.
- Explain the role of the veterinarian in local, regional, national and international surveillance programs.
- Describe the strengths and weaknesses of existing animal health surveillance programs

(Evidence-Based Decision Making - Infectious Disease Control and Surveillance)

8. Identify, quantify and assist with outbreaks of disease problems.
 - Explain and describe the conduct of an outbreak investigation.
 - Calculate and interpret the appropriate rates and statistical analyses applied to outbreak investigation.

(Evidence-Based Decision Making - Outbreak Investigation)
9. Explain techniques for assessing and measuring animal behaviour for individual animals and groups of animals (Animal Behaviour and Welfare - Clinical Animal Behaviour).
10. Identify the origin of behavioural alterations as it relates to the physical and behavioural health of the animal (Animal Behaviour and Welfare - Clinical Animal Behaviour).
11. Identify and explain the differences between normal, abnormal, and problem behaviour (Animal Behaviour and Welfare - Clinical Animal Behaviour).
12. Describe common normal, abnormal and problem behaviour in domestic animals and explain the ethological principles underlying them (Animal Behaviour and Welfare - Clinical Animal Behaviour).

13. Describe behaviour modification therapies and preventative treatments for common abnormal and problem behaviour in domestic animals (Animal Behaviour and Welfare - Clinical Animal Behaviour).
 14. Describe how behaviour can be used to understand the welfare of animals (Animal Behaviour and Welfare - Clinical Animal Behaviour).
 15. Identify key animal welfare issues in common animal industries, and possible methods for prevention and treatment (Animal Behaviour and Welfare - Animal Welfare).
 16. Explain techniques for practical assessment of animal welfare of individual animals and groups of animals (e.g., veterinary clinics, dairy cattle) (Animal Behaviour and Welfare - Animal Welfare).
 17. Describe the role of the veterinarian in inspection of foods of animal origin and why this is important to human and animal health (One Health).
 18. Explain the range and magnitude of human, animal and environmental health risks posed by veterinary drugs and other chemicals used in food animal production (One Health).
 19. Explain the responsibilities of veterinary practitioners to reduce the impact of drug residues and resistance determinants in foods of animal origin (One Health).
 20. Explain, in general terms, the range and magnitude of health risks to humans, animals and the environment posed by microbial pathogens, their toxins, and other contaminants in companion animals, food animals, and foods from animals and identify procedures to reduce the risks (One Health).
 21. Describe the principles of government animal disease regulatory programs and the responsibilities of veterinarians with respect to these programs, and with respect to reportable diseases (One Health).
 22. Explain, in general terms, and be able to give examples of health risks to humans posed by domestic animals, focusing on zoonotic and food-borne disease (One Health).
 23. Explain and provide examples of how veterinarians working in private practice can apply a One Health approach (One Health).
 24. Explain the expectations of a private veterinary practitioner to address a suspected case of Rabies in companion, wild and food animals (One Health).
 25. Identify and explain the principal roles of veterinarians in reportable disease control, and in the detection and prevention of various adulterants (including veterinary drug residues, microbial hazards, and lesions of animal disease) in milk, meat and eggs (One Health).
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5 Teaching and Learning Activities

Lecture and laboratory dates, times and rooms are listed in the Phase 2 schedule.

6 Assessments

For all units students are responsible for the following:

- Materials covered during lectures and labs
- Participation in group discussions as necessary
- Assigned readings and in-class assignments

Evidence-Based Decision Making Assignment:

- Best Evidence Topic (BestBET) Assignment (lab exercise and written submission)

Animal Behaviour and Welfare Assignment:

- Animal Behaviour and Welfare Client Handout (written submission)

Students are required to complete each midterm exam, the course assignments and the final exam, and will be graded as incomplete in this course if any of these components are missing. If a midterm exam is missed for appropriately documented medical or compassionate reasons (please see the appropriate section of the Phase 2 website), then arrangements will be made by the course co-ordinators for a make-up exam at the earliest possible date following the midterm exam date. Further details pertaining to the evaluations for the course appear below the table.

Quizzes:

The course material will be assessed in-course through 3 quizzes on the dates listed below. Each component may consist of multiple choice, short answer and/or short essay type questions.

6.1 Assessment Details

Written Formative Test (6%)

Date: Mon, Oct 28

Week 9

Lecture and laboratory material covered in the course to that point.

Written Submission (12%)

Date: Fri, Nov 1
Week 9

BestBET Assignment:

During the course students will be asked, in groups, to develop a clinical question regarding the care of a patient and then to search the veterinary literature to find up to three current articles published in refereed veterinary journals that will help to answer the question. The students will evaluate the strengths and weaknesses of the articles according to the guidelines for critical appraisal presented in the course. Based on the quality of the evidence and the arguments presented in these reference papers, the students will answer the clinical question and make a decision about how to proceed with the management of the clinical case in a written report. Once chosen by the student, the clinical question will be submitted to Dr. Kelton or the graduate teaching assistant for approval, prior to the end of Week 5 (Oct 4). The final written evaluation will be assessed for content and quality. The written submissions will be due at the end of Week 9 (Nov 1). Further details about the expected content and format will be posted on the course site in the Fall semester.

Written Formative Test (6%)

Date: Mon, Nov 18
Week 12

EBVM lectures 13 & 14, and EBVM Lab 4 (Peregrine material)

Written Formative Test (6%)

Date: Mon, Mar 9
Week 28

Lecture and laboratory material covered for Animal Behaviour and Welfare unit.

Written Submission (5%)

Date: Fri, Mar 13
Week 28

Animal Behaviour and Welfare Client Handout:

Students will be asked to choose from a list of behaviour and welfare problems relevant to either a companion or food animal species, and to work in pairs to develop a client handout about the problem. The assignment will build on the theories and techniques discussed in class by incorporating relevant scientific literature, industry guidelines, and relevant legislation. The handout will be assessed for clarity, content and quality. Further details on the expected content and format will be forthcoming in the Winter semester.

Final Exam - Whole Course (65%)

Date: Wed, Apr 22

Written – multiple choice, short answer, short essay.

Cumulative covering all lecture and laboratory material for the entire course.

This exam will be written in the final exam period, as scheduled. The exam will be of 3 hours duration and will address the entire course.

7 University Statements

7.1 Email Communication

As per university regulations, all students are required to check their e-mail account regularly: e-mail is the official route of communication between the University and its students.

7.2 When You Cannot Meet a Course Requirement

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons please advise the course instructor (or designated person, such as a teaching assistant) in writing, with your name, id#, and e-mail contact. The grounds for Academic Consideration are detailed in the Undergraduate and Graduate Calendars.

Undergraduate Calendar - Academic Consideration and Appeals

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml>

Graduate Calendar - Grounds for Academic Consideration

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml>

Associate Diploma Calendar - Academic Consideration, Appeals and Petitions

<https://www.uoguelph.ca/registrar/calendars/diploma/current/index.shtml>

7.3 Drop Date

Courses that are one semester long must be dropped by the end of last day of classes; two-semester courses must be dropped by the last day of classes in the second semester. The regulations and procedures for course registration are available in the Undergraduate and Graduate Calendars.

Undergraduate Calendar - Dropping Courses

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-drop.shtml>

Graduate Calendar - Registration Changes

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/genreg-reg-regchg.shtml>

Associate Diploma Calendar - Dropping Courses

<https://www.uoguelph.ca/registrar/calendars/diploma/current/c08/c08-drop.shtml>

7.4 Copies of Out-of-class Assignments

Keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be asked to resubmit work at any time.

7.5 Accessibility

The University promotes the full participation of students who experience disabilities in their academic programs. To that end, the provision of academic accommodation is a shared responsibility between the University and the student.

When accommodations are needed, the student is required to first register with Student Accessibility Services (SAS). Documentation to substantiate the existence of a disability is required; however, interim accommodations may be possible while that process is underway.

Accommodations are available for both permanent and temporary disabilities. It should be noted that common illnesses such as a cold or the flu do not constitute a disability.

Use of the SAS Exam Centre requires students to book their exams at least 7 days in advance and not later than the 40th Class Day.

For Guelph students, information can be found on the SAS website
<https://www.uoguelph.ca/sas>

For Ridgetown students, information can be found on the Ridgetown SAS website
<https://www.ridgetownc.com/services/accessibilityservices.cfm>

7.6 Academic Integrity

The University of Guelph is committed to upholding the highest standards of academic integrity, and it is the responsibility of all members of the University community—faculty, staff, and students—to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff, and students have the responsibility of supporting an environment that encourages academic integrity. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection.

Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

Undergraduate Calendar - Academic Misconduct
<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml>

Graduate Calendar - Academic Misconduct

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml>

7.7 Recording of Materials

Presentations that are made in relation to course work - including lectures - cannot be recorded or copied without the permission of the presenter, whether the instructor, a student, or guest lecturer. Material recorded with permission is restricted to use for that course unless further permission is granted.

7.8 Resources

The Academic Calendars are the source of information about the University of Guelph's procedures, policies, and regulations that apply to undergraduate, graduate, and diploma programs.

Academic Calendars

<https://www.uoguelph.ca/academics/calendars>
