VETM*4460 Food Animal Medicine and Surgery

Fall 2019
Section(s): C01

Department of Clinical Studies
Credit Weight: 1.00
Version 1.00 - August 19, 2019

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1 Course Details

1.1 Calendar Description

The course will contribute to students' achievement of selected DVM 2000 elements of competency in the context of the common ruminant species and swine. The primary emphasis is directed towards developing the skills, knowledge and attitudes that will permit the entry-level veterinarian to develop strategies to deal with common and uncommon diagnoses. The graduating competencies can be found on the OVC website (http://www.ovcnet.uoguelph.ca/homepage/html).

Pre-Requisites: All Phase 2 courses.
Co-Requisites: All Phase 3 courses.

1.2 Course Description

The course draws upon information from previous DVM courses; & consolidates & applies it to the study of common diseases (& some uncommon diseases) in ruminant species & swine. The principles of diagnosis & of medical & surgical treatment are emphasized.

1.3 Timetable

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.

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2 Instructional Support

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

Building abbreviations for coordinators' & instructors' offices:

ANCC Animal Cancer Centre
CRB Clinical Research Building
JASC J Archibald SA Clinic
OVCM OVC Main Building
PAHL Pathobiology/Animal Health Lab
SB Stewart Building

2.1 Instructional Support Team

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Course Co-ordinator: Donald Trout
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Dept. Clinical Studies

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3 Learning Resources

Lecture & case-discussion format, which will be supplemented with audiovisual material (e.g. PowerPoint slides/handouts), lecture notes/handouts, reading material, study questions, etc. This supplemental material, which may vary between instructors, will be placed on the VETM*4460 CourseLink web-site.

3.1 Recommended Resources

Smith BP, ed. Large animal internal medicine. 5th ed. Elsevier Mosby, 2015. (Textbook)

Hendrickson DA, Baird AN, eds. Turner & McIlwraith's techniques in large animal surgery. 4th ed. Wiley-Blackwell, 2013. (Textbook)

Zimmerman JJ, Karriker LA, Ramirez A, et al, eds. Diseases of swine. 11th ed. Wiley-Blackwell, 2019. (Textbook)

3.2 Additional Resources

Applicable issues of Vet Clin N Am [Food Anim Pract]. (Readings)

Constable PD, Hinchcliff KW, Done SH, Gruenberg W. Veterinary medicine: a textbook of the diseases of cattle, horses, sheep, pigs & goats. 11th ed. Saunders Elsevier, 2017. (Textbook)

Fubini SL, Ducharme NG. Farm animal surgery. 2nd ed. Saunders Elsevier, 2017. (Textbook)

Food animal ophthalmology. In: Gelatt KN, Gilger BC, Kern TJ, eds. Veterinary ophthalmology. 5th ed. Wiley-Blackwell, 2013. (Textbook)

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4 Learning Outcomes

A. The goal of this course is to introduce the student to the diagnosis & management of common diseases (& the recognition of uncommon diseases) of ruminants & swine, using a body-system format. The student will be expected to integrate material from courses in the previous 2 phases.
B. History & clinical signs associated with common diseases will be described & used to establish differential diagnoses (common & uncommon) to be considered. For common diseases covered in this course, the following will be emphasized:
    1. Using general principles of the pathophysiology involved to develop a rationale for selection of diagnostic tests (sometimes including response to therapy).
    2. Implications of medical/surgical treatment (including implications of no treatment) relative to the prognosis for return to normal health & function.
C. As indicated, emphasis will also be placed on a herd/flock approach to the diagnosis/monitoring, treatment & prevention of disease.

4.1 Course Learning Outcomes

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

1. Define the history, clinical findings & diagnostic tests necessary to diagnose common diseases of ruminants & swine.
2. Establish a short list of differential diagnoses based on the history & presenting clinical signs, including any potentially significant uncommon diseases (e.g. foreign or reportable disease).
3. Formulate a treatment plan (medical &/or surgical) & discuss alternate therapies for the defined clinical problem.

a. For the individual animal
b. As related to herd/flock health & management

4. Give a prognosis for the defined clinical problem.

a. For the individual animal
b. As related to herd/flock health & management

5. Be able to communicate these findings in a concise & understandable fashion to clients & colleagues.

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5 Teaching and Learning Activities

5.1 Lecture

Topics: Lecture 1 - Swine 1

Instructor: O'Sullivan

Topics: Lecture 2 - Swine 2

Instructor: O'Sullivan

Topics: Lecture 3 - Swine 3

Instructor: O'Sullivan

Topics: Lecture 4 - Swine 4

Instructor: O'Sullivan

Topics: Lecture 5 - Swine 5

Instructor: O'Sullivan

Topics: Lecture 6 - Swine 6

Instructor: O'Sullivan

Topics: Lecture 7 - Swine 7

Instructor: O'Sullivan

Topics: Lecture 8 - Swine 8

Instructor: O'Sullivan

Topics: Lecture 9 - Swine 9

Instructor: O'Sullivan

Topics: Lecture 10 - Mammary gland disease 1

Instructor: LeBlanc

Topics: Lecture 11 - Fluids, electrolytes & acid-base

Instructor: Hewson

Topics: Lecture 12 - Neonatal calf 1: Septicemia

Instructor: Hewson

Topics: Lecture 13 - Neonatal calf 2: Diarrhea

Instructor: Hewson

Topics: Lecture 14 - Swine 10

Instructor: O'Sullivan

Topics: Lecture 15 - Neonatal calf 3: Diarrhea

Instructor: Hewson

Topics: Lecture 16 - Swine 11: Parasites

Instructor: Peregrine

Topics: Lecture 17 - Mammary gland disease 2

Instructor: LeBlanc

Topics: Lecture 18 - Nutritional & metabolic disease 1

Instructor: Duffield

Topics: Lecture 19 - Nutritional & metabolic disease 2

Instructor: Duffield

Topics: Lecture 20 - Mammary gland disease 3

Instructor: LeBlanc

Topics: Lecture 21 - Nutritional & metabolic disease 3

Instructor: Duffield

Topics: Lecture 22 - GIT: Non-infectious disease 1

Instructor: Arroyo

Topics: Lecture 23 - Mammary gland disease 4

Instructor: LeBlanc

Topics: Lecture 24 - Swine 12

Instructor: O'Sullivan

Topics: Lecture 25 - Swine 13

Instructor: O'Sullivan

Topics: Lecture 26 - Nutritional & metabolic disease 4

Instructor: Duffield

Topics: Lecture 27 - Swine 14

Instructor: O'Sullivan

Topics: Lecture 28 - GIT: Non-infectious disease 2

Instructor: Arroyo

Topics: Lecture 29 - GIT: Non-infectious disease 3

Instructor: Arroyo

Topics: Lecture 30 - GIT: Infectious disease 1

Instructor: Arroyo

Topics: Lecture 31 - GIT: Infectious disease 2

Instructor: Arroyo

Topics: Lecture 32 - Swine 15

Instructor: O'Sullivan

Topics: Lecture 33 - GIT: Infectious disease 3

Instructor: Arroyo

Topics: Lecture 34 - GIT: Infectious disease 4

Instructor: Arroyo

Topics: **Midterm Exam 1: 23 lectures**

Instructor: Arroyo, Gordon, Trout

Topics: **Thanksgiving Holiday**

Topics: **Midterm-1 Review**

Instructor: **Hewson, LeBlanc, O'Sullivan, Peregrine**

Topics: Lecture 35 - GIT: Infectious disease 5

Instructor: Arroyo

Topics: Lecture 36 - GIT: Infectious disease 6

Instructor: Arroyo

Topics: Lecture 37 - Abdominal surgery 1: Anatomy

Instructor: Dubois

Topics: Lecture 38 - Abdominal surgery 2: Approaches

Instructor: Dubois

Topics: Lecture 39 - Abdominal surgery 3: Abomasal displacement

Instructor: Dubois

Topics: Lecture 40 - Abdominal surgery 4: Abomasal displacement

Instructor: Dubois

Topics: Lecture 41 - Abdominal surgery 5: Cecum, cesarean section

Instructor: Dubois

Topics: Lecture 42 - General surgery 1: Umbilical surgery

Instructor: Trout

Topics: Lecture 43 - General surgery 2: Umbilical surgery, castration

Instructor: Trout

Topics: Lecture 44 - General surgery 3: Castration, dehorning

Instructor: Trout

Topics: Lecture 45 - General surgery 4: Dehorning

Instructor: Trout

Topics: **Midterm Exam 2: 18 lectures**

Instructor: Arroyo, Gordon, Trout

Topics: Lecture 46 - General surgery 5: Urolithiasis

Instructor: Trout

Topics: Lecture 47 - Dermatology 1: Parasitic disease

Instructor: Peregrine

Topics: Lecture 48 - Dermatology 2

Instructor: Arroyo

Topics: **Midterm-2 Review**

Instructor: **Arroyo, Dubois, Duffield**

Topics: Lecture 49 - Urinary tract disease 1

Instructor: Kenney

Topics: Lecture 50 - Urinary tract disease 2

Instructor: Kenney

Topics: Lecture 51 - Respiratory disease 1

Instructor: Hewson

Topics: Lecture 52 - Respiratory disease 2

Instructor: Hewson

Topics: Lecture 53 - Respiratory disease 3

Instructor: Hewson

Topics: Lecture 54 - Respiratory disease 4

Instructor: Hewson

Topics: **December/January Holidays Break**

Topics: Lecture 55 - Circulatory disorders 1

Instructor: Kenney

Topics: Lecture 56 - Circulatory disorders 2

Instructor: Kenney

Topics: Lecture 57 - Circulatory disorders 3

Instructor: Kenney

Topics: Lecture 58 - Diseases of the lymphoid system

Instructor: Kenney

Topics: Lecture 59 - Bovine lameness 1

Instructor: Gordon

Topics: Lecture 60 - Bovine lameness 2

Instructor: Gordon

Topics: Lecture 61 - Bovine lameness 3

Instructor: Gordon

Topics: Lecture 62 - Bovine lameness 4

Instructor: Gordon

Topics: **Winter Break**

Topics: **Midterm Exam 3: 21 lectures**

Instructor: Arroyo, Gordon, Trout

Topics: Lecture 63 - Small ruminant 1

Instructor: Winder

Topics: Lecture 64 - Small ruminant 2

Instructor: Winder

Topics: Lecture 65 - Small ruminant 3

Instructor: Winder

Topics: Lecture 66 - Small ruminant 4

Instructor: Winder

Topics: **Midterm-3 Review**

Instructors: **Arroyo, Gordon, Hewson, Kenney, Peregrine, Trout**

Topics: Lecture 67 - Small ruminant 5

Instructor: Winder

Topics: Lecture 68 - Small ruminant 6: Parasite control programs

Instructor: Peregrine

Topics: Lecture 69 - Neurology 1

Instructor: Kenney

Topics: Lecture 70 - Neurology 2

Instructor: Kenney

Topics: Lecture 71 - Neurology 3

Instructor: Kenney

Topics: Lecture 72 - Ophthalmology 1

Instructor: Pinard

Topics: Lecture 73 - Ophthalmology 2

Instructor: Pinard

Topics: Lecture 74 - Vaccination programs: Dairy

Instructor: Gordon

Topics: Lecture 75 - Parasite control programs: Dairy

Instructor: Peregrine

Topics: Lecture 76 - Parasite control programs: Beef

Instructor: Peregrine

Topics: Lecture 77 - Vaccination programs: Beef

Instructor: Gordon

Topics: **Final Exam: Comprehensive over entire course**

Instructor: Arroyo, Gordon, Trout

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6 Assessments

Four Examinations: 3 midterm exams & a final exam (see details below).

There will be a post-examination review session after each of the midterm exams (i.e. after grading is completed). The basic idea of the session will be to clear up any obvious misconceptions or problem areas, & to answer specific questions that arise during the session.

- Prior to the session, students will receive their grades.
- Prior to the session, examiners will receive student-performance information.
- **Each examiner (or designated substitute) will be present at the session.**

- Using student-performance information regarding their questions, each examiner will review any questions in which performance was marginal or poor. Obviously, other questions will also be reviewed, as indicated during the session.
- At the beginning of the session, each student will sign-out a copy of their Scantron answer sheet for reference. During the session, the examination with correct answers will be projected. At the end of the session, each student must sign-in as they return the copy of their Scantron answer sheet.
- During the session, student desktops will be cleared of all material (e.g. computers, cell phones, notebooks, paper, backpacks, etc.). Use of cell phones during the session will be forbidden. Two of the course coordinators will also move about the room to invigilate the session against copying/recording of questions or answers.
- For 3 weeks after the review session, students may still review their own exam & the correct answers on an individual basis by appointment with the Administrative Assistant, Dept. of Clinical Studies (Room 2142, ext. 54069, ovcsas.clin@uoguelph.ca). There will not be an opportunity to review the examination outside of this period.

6.1 Assessment Details

Midterm exam 1 (15%)

a. 23 lectures from Weeks 1-5

b. LeBlanc	Mammary gland disease	4 lectures
Hewson	Fluids, electrolytes & acid-base Neonatal calf	4
O'Sullivan & Peregrine	Swine	15
		23

Midterm exam 2 (12%)

a. 18 lectures from Weeks 3-9

b. Duffield	Nutritional & metabolic disease	4 lectures
Arroyo	GI tract: Non-infectious disease	3

Arroyo	GI tract: Infectious disease	6
Dubois	Abdominal surgery	5
		18

Midterm exam 3 (13%)

a 21 lectures from Weeks 9-24

b. Trout	General surgery	5 lectures
Arroyo & Peregrine	Dermatology	2
Kenney	Urinary tract disease	2
Kenney	Circulatory disorders	
	Diseases of the lymphoid system	4
Hewson	Respiratory disease	4
Gordon	Bovine lameness	4
		21

Final exam (60%)

a. Comprehensive over the entire course: All 77 lectures from Weeks 1-31

b. Slightly greater emphasis will be given to new material (15 lectures) from Weeks 28-31.

c. Winder & Peregrine	Small ruminant	6 lectures
Kenney	Neurology	3

Pinard	Ophthalmology	2
Gordon	Vaccination programs: Beef & dairy	2
Peregrine	Parasite control: Beef & dairy	2
		15

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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

7.3 Drop Date

Students will have until the last day of classes to drop courses without academic penalty. The deadline to drop two-semester courses will be the last day of classes in the second semester. This applies to all students (undergraduate, graduate and diploma) except for Doctor of Veterinary Medicine and Associate Diploma in Veterinary Technology (conventional and alternative delivery) students. The regulations and procedures for course registration are available in their respective Academic 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.

More information can be found on the SAS website
https://www.uoguelph.ca/sas

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