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-Requisite(s): All Phase 2 courses.
Co-Requisite(s): 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.

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:
2.1 Instructor(s)

Todd Duffield  
Email: tduffiel@uoguelph.ca  
Telephone: +1-519-824-4120 x54057  
Office: SB 2509A  
Dept. Population Medicine

Daniel Kenney  
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Office: JASC 1417  
Dept. OVC-HSC

Judith Koenig  
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Stephen LeBlanc  
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Terri O’Sullivan  
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Office: CRB 205  
Dept. Population Medicine

Andrew Peregrine  
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Office: PAHL 3825  
Dept. Pathobiology

Chantale Pinard  
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Telephone: +1-519-824-4120 x54148  
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Henry Staempfli  
Email: hstaempf@uoguelph.ca  
Telephone: +1-519-824-4120 x54063  
Office: ANCC 2161  
Dept. Clinical Studies
2.2 Instructional Support Team

Course Co-ordinator: Luis Arroyo Castro
Email: larroyo@uoguelph.ca
Telephone: +1-519-824-4120 x54258
Office: ANCC 2165
Dept. Clinical Studies

Course Co-ordinator: Jessica Gordon
Email: jgordo04@uoguelph.ca
Telephone: +1-519-824-4120 x58813
Office: SB 2538
Dept. Population Medicine

Course Co-ordinator: Donald Trout
Email: dtrout@uoguelph.ca
Telephone: +1-519-824-4120 x54002
Office: SB 2521
Dept. Clinical Studies

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 Resource(s)

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

3.2 Additional Resource(s)

Applicable issues of Vet Clin N Am [Food Anim Pract]. (Readings)
Fubini SL, Ducharme NG. Farm animal surgery. 2nd ed. Saunders Elsevier, 2017. (Textbook)
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.

5 Teaching and Learning Activities

5.1 Lecture
Lecture 1 - Mammary gland disease 1
Instructor: LeBlanc

Lecture 2 - Mammary gland disease 2
Instructor: LeBlanc

Lecture 3 - Swine 1: Swine production & biosecurity
Instructor: O'Sullivan

Lecture 4 - Mammary gland disease 3
Instructor: LeBlanc

Lecture 5 - Mammary gland disease 4
Instructor: LeBlanc

Lecture 6 - Swine 2: PRRS
Instructor: O'Sullivan

Lecture 7 - Swine 3: Neonatal GI diseases
Instructor: O'Sullivan

Lecture 8 - Swine 4: Neonatal GI diseases
Instructor: O'Sullivan

Lecture 9 - Swine 5: Nursery-pig skin & systemic disease
Instructor: O'Sullivan

Lecture 10 - Fluids, electrolytes & acid-base
Instructor: Staempfli

Lecture 11 - Neonatal calf 1: Septicemia
Instructor: Staempfli

Lecture 12 - Swine 6: Respiratory disease
Instructor: O'Sullivan

Lecture 13 - Neonatal calf 2: Diarrhea
Instructor: Staempfli
Lecture 14 - Neonatal calf 3: Diarrhea
Instructor: Staempfli

Topic(s):
Lecture 15 - Swine 7: Respiratory disease
Instructor: O'Sullivan

Topic(s):
Lecture 16 - Swine 8: Parasites
Instructor: Peregrine

Topic(s):
Lecture 17 - Swine 9: Finishing-pig GI disease
Instructor: O'Sullivan

Topic(s):
Lecture 18 - Nutritional & metabolic disease 1
Instructor: Duffield

Topic(s):
Lecture 19 - Nutritional & metabolic disease 2
Instructor: Duffield

Topic(s):
Lecture 20 - Swine 10: Finishing-pig GI & feed-related problems
Instructor: O'Sullivan

Topic(s):
Lecture 21 - Nutritional & metabolic disease 3
Instructor: Duffield

Topic(s):
Lecture 22 - Nutritional & metabolic disease 4
Instructor: Duffield

Topic(s):
Lecture 23 - Swine 11: Reproductive diseases
Instructor: O'Sullivan

Topic(s):
Lecture 24 - Swine 12: Reproductive diseases
Instructor: O'Sullivan

Topic(s):
Lecture 25 - Swine 13: Exotic & zoonotic diseases
Instructor: O'Sullivan

Topic(s):
Lecture 26 - GIT: Non-infectious disease 1
Instructor: Staempfli

**Topic(s):** Lecture 27 - Swine 14: Nursery-pig systemic & GI disease

Instructor: O'Sullivan

**Topic(s):** Lecture 28 - GIT: Non-infectious disease 2

Instructor: Staempfli

**Topic(s):** Lecture 29 - GIT: Non-infectious disease 3

Instructor: Staempfli

**Topic(s):** Lecture 30 - GIT: Infectious disease 1

Instructor: Arroyo

**Topic(s):** Lecture 31 - Swine 15: Disease monitoring

Instructor: O'Sullivan

**Topic(s):** Lecture 32 - GIT: Infectious disease 2

Instructor: Arroyo

**Topic(s):** Lecture 33 - GIT: Infectious disease 3

Instructor: Arroyo

**Topic(s):** Thanksgiving Holiday

Instructor: Arroyo

**Topic(s):** Lecture 34 - GIT: Infectious disease 4

Instructor: Arroyo

**Topic(s):** Midterm Exam 1: 23 lectures

Instructor: Arroyo, Gordon, Trout

**Topic(s):** Midterm-1 Review

Instructor: LeBlanc, O'Sullivan, Peregrine, Staempfli

**Topic(s):** Lecture 35 - GIT: Infectious disease 5

Instructor: Arroyo

**Topic(s):** Lecture 36 - GIT: Infectious disease 6
Instructor: Arroyo

**Topic(s):** Lecture 37 - Abdominal surgery 1: Anatomy

Instructor: Koenig

**Topic(s):** Lecture 38 - Abdominal surgery 2: Approaches

Instructor: Koenig

**Topic(s):** Lecture 39 - Abdominal surgery 3: Abomasal displacement

Instructor: Koenig

**Topic(s):** Lecture 40 - Abdominal surgery 4: Abomasal displacement

Instructor: Koenig

**Topic(s):** Lecture 41 - Abdominal surgery 5: Cecum, cesarean section

Instructor: Koenig

**Topic(s):** Lecture 42 - General surgery 1: Umbilical surgery

Instructor: Trout

**Topic(s):** Lecture 43 - General surgery 2: Umbilical surgery, castration

Instructor: Trout

**Topic(s):** Lecture 44 - General surgery 3: Castration, dehorning

Instructor: Trout

**Topic(s):** Lecture 45 - General surgery 4: Dehorning

Instructor: Trout

**Topic(s):** **Midterm Exam 2: 18 lectures**

Instructor: Arroyo, Gordon, Trout

**Topic(s):** Lecture 46 - General surgery 5: Urolithiasis

Instructor: Trout

**Topic(s):** Lecture 47 - Dermatology 1: Parasitic disease

Instructor: Peregrine
Lecture 48 - Dermatology 2

Instructor: Arroyo

Midterm-2 Review

Instructor: Arroyo, Duffield, Koenig, Staempfli

Lecture 49 - Urinary tract disease 1

Instructor: Kenney

Lecture 50 - Urinary tract disease 2

Instructor: Kenney

Lecture 51 - Respiratory disease 1

Instructor: Staempfli

Lecture 52 - Respiratory disease 2

Instructor: Staempfli

Lecture 53 - Respiratory disease 3

Instructor: Staempfli

Lecture 54 - Respiratory disease 4

Instructor: Staempfli

December/January Holidays Break

Lecture 55 - Circulatory disorders 1

Instructor: Kenney

Lecture 56 - Circulatory disorders 2

Instructor: Kenney

Lecture 57 - Circulatory disorders 3

Instructor: Kenney

Lecture 58 - Diseases of the lymphoid system

Instructor: Kenney
Lecture 59 - Bovine lameness 1

Topic(s): Lecture 59 - Bovine lameness 1
Instructor: Gordon

Lecture 60 - Bovine lameness 2

Topic(s): Lecture 60 - Bovine lameness 2
Instructor: Gordon

Lecture 61 - Bovine lameness 3

Topic(s): Lecture 61 - Bovine lameness 3
Instructor: Gordon

Lecture 62 - Bovine lameness 4

Topic(s): Lecture 62 - Bovine lameness 4
Instructor: Gordon

Winter Break

Lecture 63 - Small ruminant 1

Topic(s): Lecture 63 - Small ruminant 1
Instructor: Winder

Lecture 64 - Small ruminant 2

Topic(s): Lecture 64 - Small ruminant 2
Instructor: Winder

Lecture 65 - Small ruminant 3

Topic(s): Lecture 65 - Small ruminant 3
Instructor: Winder

Lecture 66 - Small ruminant 4

Topic(s): Lecture 66 - Small ruminant 4
Instructor: Winder

Midterm-3 Review

Topic(s): Midterm-3 Review
Instructors: Arroyo, Gordon, Kenney, Peregrine, Staempfli, Trout

Midterm Exam 3: 21 lectures

Topic(s): Midterm Exam 3: 21 lectures
Instructor: Arroyo, Gordon, Trout

Lecture 67 - Small ruminant 5

Topic(s): Lecture 67 - Small ruminant 5
Instructor: Winder

Lecture 68 - Small ruminant 6: Parasite control programs

Topic(s): Lecture 68 - Small ruminant 6: Parasite control programs
Instructor: Peregrine
<table>
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<tr>
<th>Topic(s):</th>
<th>Lecture 69 - Neurology 1</th>
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<tr>
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<tr>
<th>Topic(s):</th>
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<th>Lecture 74 - Vaccination programs: Dairy</th>
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<tr>
<th>Topic(s):</th>
<th>Lecture 75 - Parasite control programs: Dairy</th>
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<td>Instructor:</td>
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<th>Topic(s):</th>
<th>Lecture 76 - Parasite control programs: Beef</th>
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<td>Instructor:</td>
<td>Peregrine</td>
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<tr>
<th>Topic(s):</th>
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<tr>
<td>Instructor:</td>
<td>Gordon</td>
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<tr>
<th>Topic(s):</th>
<th>Final Exam: Comprehensive over entire course</th>
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<tbody>
<tr>
<td>Instructor:</td>
<td>Arroyo, Gordon, Trout</td>
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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 Linda Wing, Administrative Assistant, Dept. of Clinical Studies (Room 2142, ext. 54069, lwing@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
   - Staempfli
   - 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
   - Staempfli
   - GI tract: Non-infectious disease 3
   - Arroyo
   - GI tract: Infectious disease 6
   - König
   - Abdominal surgery 5
   - 18
## Midterm exam 3 (13%)

- a. 21 lectures from Weeks 9-23

<table>
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<tr>
<th>Speaker</th>
<th>Topic</th>
<th>Lectures</th>
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</thead>
<tbody>
<tr>
<td>Trout</td>
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<td>Arroyo &amp; Peregrine</td>
<td>Dermatology</td>
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<tr>
<td>Kenney</td>
<td>Urinary tract disease</td>
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<tr>
<td>Kenney</td>
<td>Circulatory disorders</td>
<td></td>
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<tr>
<td></td>
<td>Diseases of the lymphoid system</td>
<td>4</td>
</tr>
<tr>
<td>Staempfli</td>
<td>Respiratory disease</td>
<td>4</td>
</tr>
<tr>
<td>Gordon</td>
<td>Bovine lameness</td>
<td>4</td>
</tr>
</tbody>
</table>

## Final exam (60%)

- a. Comprehensive over the entire course: All 77 lectures from Weeks 1-30

- b. Slightly greater emphasis will be given to new material (15 lectures) from Weeks 27-30.

<table>
<thead>
<tr>
<th>Speaker</th>
<th>Topic</th>
<th>Lectures</th>
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<tbody>
<tr>
<td>Winder &amp; Peregrine</td>
<td>Small ruminant</td>
<td>6</td>
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<tr>
<td>Kenney</td>
<td>Neurology</td>
<td>3</td>
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<td>Pinard</td>
<td>Ophthalmology</td>
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<td>Gordon</td>
<td>Vaccination programs: Beef &amp; dairy</td>
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</tr>
<tr>
<td>Peregrine</td>
<td>Parasite control: Beef &amp; dairy</td>
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</tbody>
</table>

## 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 regulations and procedures for Academic Consideration are detailed in the Undergraduate Calendar.

7.3 Drop Date

Courses that are one semester long must be dropped by the end of the fortieth class day; two-semester courses must be dropped by the last day of the add period in the second semester. The regulations and procedures for Dropping Courses are available in the Undergraduate Calendar.

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: www.uoguelph.ca/sas

7.6 Academic Misconduct

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 discourages misconduct. 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.
The Academic Misconduct Policy is detailed in the Undergraduate Calendar.

7.7 Recording of Materials

Presentations which are made in relation to course work—including lectures—cannot be recorded or copied without the permission of the presenter, whether the instructor, a classmate 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 which apply to undergraduate, graduate and diploma programs.