1 Course Details

1.1 Calendar Description

This course examines the causes and effects of important diseases of food animals in Canada, with a focus on dairy cattle. Elements of physiology, epidemiology, microbiology, nutrition, and production management are integrated into a health management approach emphasizing disease prevention. The course is directed at senior undergraduate students with interest in and knowledge of, food animal production agriculture.

Pre-Requisite(s): ANSC*2340 or ANSC*3080

Restriction(s): This is a Priority Access Course. Some restrictions may apply during some time periods. Please see the Department of Population Medicine web site for more information.

1.2 Timetable

Fall 2018

In-class

Tuesdays and Thursdays (first class Thurs Sept 6, 2018)

1:00pm-2:20pm

RICH Room 2520

Please see WebAdvisor for the latest information

1.3 Final Exam

Wed Dec 12, 2018

11:30AM-1:30PM

Location TBA: Please see WebAdvisor for the latest information.
2 Instructional Support

Welcome to the Animal Health POPM*4230 F2018 course offering.

This course is team taught by species specialists.

All administration questions are to be directed to Dr. Terri O'Sullivan, Course Coordinator.

However, please note that Dr O'Sullivan will be unavailable from Nov 8-20th, 2018

All questions are to be posted on Courselink in the Discussions List section. Do not email instructors directly regarding course content. The GTAs will be monitoring the questions posted and will coordinate the responses. This method will minimize repeated questions on same topic and all students will have the opportunity to read the discussion list and learn from the questions as well.

2.1 Instructor(s)

Terri O'Sullivan
Email: tosulliv@uoguelph.ca
Telephone: 1-519-824-4120 x54079
Office: Population Medicine (Clinical Research) Room 205
Office Hours: Course Coordinator

Introductory Lectures: Intro to disease, health management, drug use, immunology

Zoonotic and foreign animal diseases

Swine Lectures

PLEASE NOTE: Dr O'Sullivan will be unavailable November 8-20th, 2018

Charlotte Winder
Email: winderc@uoguelph.ca
Telephone: 1-519-824-4120 x53944
Office: OVC Stewart Building 2522
Office Hours: Small Ruminant and Beef Lectures

Michele Guerin
Email: mguerin@uoguelph.ca
Telephone: 1-519-824-4120 x54486
Office: Population Medicine (Clinical Research) Room 203
Office Hours: Poultry Lectures

David Renaud
Email: renaudd@uoguelph.ca
Telephone: 1-519-824-4120 x54595
Office: OVC Stewart Building 2507
Office Hours: Dairy Lectures

Taika von Konigslove
Email: tvonkoni@uoguelph.ca
2.2 Teaching Assistant(s)

Teaching Assistant: Maggie Henry  
Email: mhenry12@uoguelph.ca  
Office: TBA  
Office Hours: Office Hours TBA

Teaching Assistant: Hanne Goetz  
Email: hgoetz@uoguelph.ca  
Office: TBA  
Office Hours: Office Hours TBA

2.3 Course Coordinator

Terri O’Sullivan

Course Coordinator

PLEASE NOTE: Dr O’Sullivan will be unavailable November 8-20th, 2018

3 Learning Resources

There is no required textbook for this course. The following list is suggested additional reading material.

3.1 Recommended Resource(s)

Websites and additional readings posted on Courselink during course (Website)
Veterinary Medicine, 10th ed., Radostits et al. (Textbook)
Herd Health, 3rd ed., Radostits et al. (Textbook)
Merck Veterinary Manual, 10th ed. (Textbook)

4 Learning Outcomes

4.1 Course Learning Outcomes

By the end of this course, you should be able to:
1. Describe health and disease in the context of production animal health management
2. Identify and articulate the relative importance of common diseases of cattle, swine, small ruminants, and poultry in Canada as it pertains to animal health, welfare, and health management
3. Explain, at a basic level, the risk factors, etiology, clinical signs, interrelationships, and preventive management of common infectious and metabolic diseases of cattle, swine, small ruminants, and poultry

4. Understand and describe the association of common diseases with sub-optimum productivity or welfare in food-producing animals

5. Explain the elements of a health management program for dairy cattle, beef cattle, swine, poultry, and small ruminants in Ontario

6. Understand and describe antimicrobial resistance and antimicrobial residues as it pertains to animal health management, animal health and food safety

7. Summarize the regulatory processes for drug approval and use in food animals in Canada, and the management considerations for drug use by veterinarians and producers

8. List important zoonotic diseases of ruminants, swine, and poultry and their methods of transmission, and effects in humans

9. List and describe important foreign animal diseases and understand the risk of incursion into Canada

5 Teaching and Learning Activities

5.1 Lecture

<table>
<thead>
<tr>
<th>Lecture #</th>
<th>Day</th>
<th>Date</th>
<th>Topic</th>
<th>Lecturer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Thursday</td>
<td>Sept 6</td>
<td>Class Introduction and Introduction to disease</td>
<td>O’Sullivan</td>
</tr>
<tr>
<td>2</td>
<td>Tuesday</td>
<td>Sept 11</td>
<td>Health management</td>
<td>O’Sullivan</td>
</tr>
<tr>
<td>3</td>
<td>Thursday</td>
<td>Sept 13</td>
<td>Immunology and vaccination</td>
<td>O’Sullivan</td>
</tr>
<tr>
<td></td>
<td>Date</td>
<td>Week</td>
<td>Topic</td>
<td>Instructor</td>
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<tr>
<td>4</td>
<td>Tuesday</td>
<td>Sept 18</td>
<td>Drug and antimicrobial use in food animals</td>
<td>O’Sullivan</td>
</tr>
<tr>
<td>5</td>
<td>Thursday</td>
<td>Sept 20</td>
<td>Swine #1</td>
<td>O’Sullivan</td>
</tr>
<tr>
<td>6</td>
<td>Tuesday</td>
<td>Sept 25</td>
<td>Swine #2</td>
<td>O’Sullivan</td>
</tr>
<tr>
<td>7</td>
<td>Thursday</td>
<td>Sept 27</td>
<td>Swine #3</td>
<td>O’Sullivan</td>
</tr>
<tr>
<td>8</td>
<td>Tuesday</td>
<td>Oct 2</td>
<td>Swine #4</td>
<td>O’Sullivan</td>
</tr>
<tr>
<td>9</td>
<td>Thursday</td>
<td>Oct 4</td>
<td>Swine #5</td>
<td>O’Sullivan</td>
</tr>
<tr>
<td>10</td>
<td>Tuesday</td>
<td>Oct 9</td>
<td>Study break day no lectures</td>
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</tr>
<tr>
<td></td>
<td>Thursday</td>
<td>Oct 11</td>
<td>Midterm #1 In class</td>
<td>O’Sullivan</td>
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<td></td>
<td></td>
<td></td>
<td>30% of final grade</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Covers material from lectures 1-9</td>
<td></td>
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<tr>
<td>11</td>
<td>Tuesday</td>
<td>Oct 16</td>
<td>Small ruminant #1</td>
<td>Winder</td>
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<tr>
<td>12</td>
<td>Thursday</td>
<td>Oct 18</td>
<td>Small ruminant #2</td>
<td>Winder</td>
</tr>
<tr>
<td>13</td>
<td>Tuesday</td>
<td>Oct 23</td>
<td>Beef #1</td>
<td>Winder</td>
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<tr>
<td>14</td>
<td>Thursday</td>
<td>Oct 25</td>
<td>Beef #2</td>
<td>Winder</td>
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<tr>
<td>15</td>
<td>Tuesday</td>
<td>Oct 30</td>
<td></td>
<td><strong>Midterm #2</strong>&lt;br&gt;Covers lecture material from lectures 1-4 and 11-14</td>
</tr>
<tr>
<td>16</td>
<td>Thursday</td>
<td>Nov  1</td>
<td></td>
<td>Foreign animal diseases and Zoonotic diseases</td>
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<td></td>
<td><strong>Important Date!</strong></td>
<td></td>
<td></td>
<td><strong>40th Class day</strong></td>
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<td></td>
<td></td>
<td>Nov 2</td>
<td></td>
<td><strong>40th class day</strong>&lt;br&gt;Last drop day</td>
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<tr>
<td>17</td>
<td>Tuesday</td>
<td>Nov  6</td>
<td></td>
<td>Poultry #1</td>
</tr>
<tr>
<td>18</td>
<td>Thursday</td>
<td>Nov  8</td>
<td></td>
<td>Poultry #2</td>
</tr>
<tr>
<td>19</td>
<td>Tuesday</td>
<td>Nov 13</td>
<td></td>
<td>Dairy #1</td>
</tr>
<tr>
<td>20</td>
<td>Thursday</td>
<td>Nov 15</td>
<td></td>
<td><strong>INFOGRAPHIC ASSIGNMENT DUE</strong>&lt;br&gt;15% of final grade</td>
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<td><strong>Important Date!</strong></td>
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<tr>
<td>21</td>
<td>Tuesday</td>
<td>Nov 20</td>
<td></td>
<td>Dairy #3</td>
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</tbody>
</table>
## 6 Assessments

The midterms and final exam will be closed book exams.

### 6.1 Assessment Details

**Midterm Examination #1 (30%)**

**Date:** Thursday October 11, 2018 - IN CLASS 1:00PM-2:20PM

- Will include multiple choice and short answer questions
- Closed book exam

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<table>
<thead>
<tr>
<th>22</th>
<th>Thursday</th>
<th>Nov 22</th>
<th>Dairy #4</th>
<th>Renaud</th>
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</thead>
<tbody>
<tr>
<td>23</td>
<td>Tuesday</td>
<td>Nov 27</td>
<td>Dairy #5</td>
<td>Von Konigslow</td>
</tr>
<tr>
<td>24</td>
<td>Thursday</td>
<td>Thurs Nov 29</td>
<td>LAST CLASS</td>
<td>Dairy #6</td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td>Course wrap-up and course/teaching evaluations! (O'Sullivan)</td>
</tr>
</tbody>
</table>

**Important Date!**

**Wed Dec 12, 2018 11:30AM - 1:30PM**

**LOCATION TBA**

**FINAL EXAM**
30% of final grade

Material from all the lectures (i.e. lectures 1-24) will be included in final exam.

There will be more emphasis on lectures 17-24

**O'Sullivan**
• Midterm will cover material from lectures 1-9

Midterm Examination #2 (25%)
Date: Tuesday October 30, 2018 - IN CLASS 1:00PM-2:20PM

• Will include multiple choice and short answer questions
• Closed book exam
• Midterm will cover material from lectures 1-4, and 10-14

Final examination (30%)
Date: Wed, Dec 12, 11:30 AM - 1:30 PM, See WebAdvisor for updated information

• Will include multiple choice and short answer questions
• Closed book exam
• Final examination will cover material from the entire course (lectures 1-24) with emphasis on lectures 16-24

Animal Health Infographic assignment (15%)
Due: Thu, Nov 15, 11:59 PM, Hand in via CourseLink

Infographic Assignment

(15% of final grade)

The overall task of this assignment is for you to design a quick visual reference guide or fact sheet in the form of an infographic. The infographic is to be designed to provide information portraying a specific area of food-animal health or a health management technique/theory.

The target audience for this infographic includes producers (i.e. swine producer, dairy producer) and any staff members that they may employ to work on their production unit(s). The idea is that this infographic could be distributed to producers so that they may use them on their farm to serve as an educational sheet or quick reference guide for themselves or any other farm employees.

You should target your infographic for a specific commodity (e.g. swine, dairy, beef, poultry, etc) and consider narrowing it down further to a specific age or production class of a specific commodity (e.g. nursery pigs, dairy calves, etc).

General infographic topic suggestions: You may narrow it down to a specific message within a topic. The following list is to serve as a guideline and you may choose another topic
that interests you, providing it is a topic directed at North American production animal health and health management.

- Importance of biosecurity and/or recommended biosecurity actions (commodity specific, stage of production specific)
- Importance of prudent use of antimicrobials in food-producing animals (commodity specific)
- Clinical signs associated with overall health and welfare (commodity specific, stage of production specific)
- Clinical signs associated with a specific disease i.e. what to watch for
- Vaccine storage and handling recommendations for use on farms (commodity specific)
- Swine production pig flow aimed at providing information for new employees
- Poultry stages of production aimed at providing information for new employees

RESOURCES: infographic training sessions are available in the library. Lecture materials, independent readings of recommended reading list, independent research. Examples will be provided in class.

FORMAT:

- Infographic must be legible on a legal sized (11x14) piece of paper. Hence the maximum size is one-page (11x14)
- Must contain a title
- Must contain a date and author name i.e. Nov 2018. O'Sullivan, T
- Page orientation can be in landscape or portrait layout
- You may design your infographic in any software (i.e. Powerpoint, Paint, Draw, etc)
- You must hand in your assignment in two electronic versions: the software version you used to design the infographic i.e. Powerpoint, AND it must also be converted to a PDF and handed in as a PDF.
- You should provide 1-2 references within the infographic to back up any factual claims
- Images and text should be clear, free of typographical errors, and easy to read/follow

DUE DATE - IMPORTANT INFORMATION:

Infographics are due no later than Thurs November 15th, 2018 23:59 EST.

The two software versions of your infographic are to be handed in via Courselink

Rubric:
1. Title: accurately depicts content and message of infographic
2. Format requirements are met in full
3. The objective of the infographic message is readily identified
4. Infographic images and text are clearly presented
5. The flow of the images, text, and message(s) are easy to follow and appropriate for target audience
6. The infographic message is factually correct
7. Overall impression

7 Course Statements

7.1 Student Questions

*IMPORTANT: Please post all lecture content questions to the discussion list on Courselink. The discussion list and forum topics will be moderated by the GTAs.

Please direct all administration inquires to Dr. O'Sullivan

7.2 Make-up Examinations:

Make-up examinations for missed examinations will be permitted for documented medical, psychological and/or compassionate reasons, in accordance with the Undergraduate Calendar https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml

Please also, refer to the section below titled:

"When you cannot meet a course requirement"

7.3 Grades

The following is taken from the University of Guelph undergraduate calendar and describes the criteria for and meaning of grade scores.

http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-grds-proc.shtml

80 - 100 (A) Excellent. An outstanding performance in which the student demonstrates a superior grasp of the subject matter, and an ability to go beyond the given material in a critical and constructive manner. The student demonstrates a high degree of creative and/or logical thinking, a superior ability to organize, to analyze, and to integrate ideas, and a thorough
familiarity with the appropriate literature and techniques.

70 - 79 (B) Good. A more than adequate performance in which the student demonstrates a thorough grasp of the subject matter, and an ability to organize and examine the material in a critical and constructive manner. The student demonstrates a good understanding of the relevant issues and a familiarity with the appropriate literature and techniques.

60 - 69 (C) Acceptable. An adequate performance in which the student demonstrates a generally adequate grasp of the subject matter and a moderate ability to examine the material in a critical and constructive manner. The student displays an adequate understanding of the relevant issues, and a general familiarity with the appropriate literature and techniques.

50 - 59 (D) Minimally Acceptable. A barely adequate performance in which the student demonstrates a familiarity with the subject matter, but whose attempts to examine the material in a critical and constructive manner are only partially successful. The student displays some understanding of the relevant issues, and some familiarity with the appropriate literature and techniques.

0 - 49 (F) Fail. An inadequate performance.

7.4 Infographic Assignment

The infographic assignment must be handed in no later than Thurs Nov 15, 2018 at 11:59 PM EST. The infographic assignment is worth 15% of your final grade.

If you cannot hand in your assignment by the due date please refer to the section below titled: "When you cannot meet a course requirement"

Assignments handed in past the due date will be subject to a 10% overall grade deduction per day late.

8 University Statements
8.1 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.

8.2 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.

8.3 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.

8.4 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.

8.5 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

8.6 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.

8.7 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.

8.8 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.