



VETM*3440 Clinical Medicine II

Fall 2019

Section(s): C01

Department of Clinical Studies

Credit Weight: 0.50

Version 1.00 - August 13, 2019

1 Course Details

1.1 Calendar Description

The course is a continuation of Clinical Medicine I. It will contribute to students' achievement of selected elements of graduating competency in the areas of clinical examination of specific organ systems of various species. Students will enhance and refine their clinical problem solving skills using case material from the Veterinary Teaching Hospital. They will continue to develop their verbal and written communication skills through case simulations and analyses. The course will be presented using lectures, laboratory classes and independent study. The graduating competencies can be found on the OVC website (<http://www.ovcnet.uoguelph.ca/homepage/html>).

Pre-Requisites: All Phase 1 courses.

Co-Requisites: All Phase 2 courses.

1.2 Course Description

This course consists of 43 lectures; 10 clinically-oriented laboratories; 2 review laboratories; and prescribed self-study material available on the Courselink website for this course. The course consists of the following main components:

- Clinical Medicine/Problem-Oriented Medical Approach (POMA)
- Diagnostic Imaging
- Neurology

1.3 Timetable

Timetable subject to change. Please see EnCampus Portal for the latest information.

1.4 Final Exam

Time and location subject to change. Please see EnCampus Portal for the latest information.

2 Instructional Support

Instructors

Clinical Faculty (Department of Clinical Studies)

Ruminant Field Service Faculty (Department of Population Medicine)

Small Mammal Faculty (Department of Pathobiology)

Graduate Students (Departments of Clinical Studies, Population Medicine and Pathobiology)

Clinical Residents, Interns and AHT's (OVC-Health Sciences Centre)

Hill's Pet Nutrition Primary Healthcare Centre clinicians and hospital staff

2.1 Instructional Support Team

Course Co-ordinator: Joanne Hewson DVM, PhD, DACVIM (LA)
Email: jhewson@uoguelph.ca
Telephone: +1-519-824-4120 x54423
Office: OVC Dean's Office, Room 2651
(Course Co-ordinator, Lead contact for the Clinical Medicine/POMA Large Animal components)

Course Co-ordinator: Alice Defarges DVM, MSC, DACVIM (SAIM)
Email: adefarge@uoguelph.ca
Telephone: +1-226-924-5894
Office: OVCP, Room 2104
(Course Co-ordinator, Lead contact for the Clinical Medicine/POMA Small Animal components)

Course Co-ordinator: Deep Khosa BSc, BVMS, MANZCVS (SAM)
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Office: OVCS 2529
(Lead contact for the Primary Healthcare Centre components)

Course Co-ordinator: Stephanie Nykamp
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Office: OVCHSC 1442
(Lead contact for the Diagnostic Imaging component - Fall 2019 semester only)

Course Co-ordinator: Alex Zur Linden DVM, DACVR
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Telephone: +1-519-824-4120 x56206
Office: OVCP, Room 2151
(Lead contact for the Diagnostic Imaging component - Winter 2020 semester only)

Course Co-ordinator: Luis Gaitero
Email: lgaitero@uoguelph.ca
Telephone: +1-519-824-4120 x54021
Office: OVCP 2101
(Lead contact for the Neurology component)

2.2 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 2 information on the OVC website.

3 Learning Resources

All notes and instructional videos are available on the VETM*3440 Clinical Medicine II course website on Courselink. Printed course notes will not be provided.

All lab material and self-study modules for the Diagnostic Imaging component of this course are available through the OVC Digital Image Library – mirc.ovc.uoguelph.ca. Please refer to the course Courselink site for the login and password to access this library. You are encouraged to search this database for other images to assist your learning.

3.1 Additional Resources

Additional Resources: General Clinical Skills (Textbook)

1. Coombes N and Silva-Fletcher A. Veterinary Clinical Skills Manual. CABI, 2018.

ADDITIONAL RESOURCES: SMALL ANIMAL MEDICINE (Textbook)

1. Allen DG, Kruth SA, Garvey MS (eds). Small Animal Medicine. Lippincott, 1991. (See pages 3-11)
2. Ettinger SJ, Feldman ED (eds). Textbook of Veterinary Internal Medicine. 7th Saunders, 2010.
3. Nelson RW Couto CG. Small Animal Internal Medicine. 5th ed. Elsevier, 2014.
4. Tilley LP, Smith FWK. The 5 minute Veterinary Consult: Canine and Feline. 5th ed. Wiley-Blackwell, 2011.

ADDITIONAL RESOURCES: LARGE ANIMAL MEDICINE (Textbook)

1. Smith BP, Van Metre D, Pusterla N. Large Animal Internal Medicine, 6th Edition, Elsevier, 2019.

ADDITIONAL RESOURCES: DIAGNOSTIC IMAGING SECTION (Textbook)

1. Thrall DE. Textbook of Veterinary Diagnostic Radiology. 6th WB Saunders Ltd, 2013.
2. OVC teaching file system: mirc.ovc.uoguelph.ca (**Please see the Courselink site for this course for the login and password to access this resource**)
3. Equine limb radiology site of normal:
<http://apps.cvm.iastate.edu/limbanatomy/>
4. Normal radiology site: http://vetmed.illinois.edu/courses/imaging_anatomy/

ADDITIONAL RESOURCES: NEUROLOGY SECTION (Textbook)

1. Dewey CW & da Costa RC. Practical guide to canine and feline neurology. Wiley-Blackwell. 3rd 2015
2. Platt SR, Olby NJ. BSAVA Manual of canine and feline neurology. 4th ed. 2013.
3. De LaHunta A, Glass EN. Veterinary neuroanatomy and clinical neurology. Saunders Elsevier. 2009.

4 Learning Outcomes

The Clinical Medicine courses presented in Phases 1, 2 and 3 represent a continuum of learning intended to foster student mastery of seven main learning outcomes by the end of Phase 3 of the DVM program:

- Animal handling and restraint
- History taking
- Physical examination of common domestic species
- Diagnosis
- Clinical problem solving
- Treatment and planning

- Medical records

This course is the second of three Clinical Medicine courses that veterinary students will complete throughout the DVM curriculum. VETM*3440 Clinical Medicine II builds upon aspects of the clinical evaluation as outlined below. Students are expected to view the course contents of Clinical Medicine courses as life-long learning of skills that will be needed during their career in veterinary medicine. Therefore, information and skills taught during VETM*3430 Clinical Medicine I will also be incorporated into assessments in this course, and VETM*3440 Clinical Medicine II will also be examined as a component of VETM*4870 Clinical Medicine III in Phase 3 of the DVM program.

*Note: All of the stated intended learning outcomes apply equally to dogs, cats, horses and ruminants.

Although lectures, online learning materials, and laboratories will introduce the skills required to achieve these learning outcomes, students will need to pursue considerable self-study practice of these skills in order to master them at a level that is required to pass this course.

4.1 Course Learning Outcomes

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

1. Animal Handling and Restraint:

- Safely and humanely handle and restrain common domestic large and small animal species, as well as small mammal species

2. History Taking:

- Develop, reinforce and utilize observational and inquiry skills
- Reinforce use of a standard process for obtaining a history in any species
- Identify abnormal history information

3. Physical Examination:

- Perform a basic physical exam at the animal level (360⁰ - in all species)
- Demonstrate an efficiency in performing a physical exam
- Demonstrate a sequential/logical approach
- Demonstrate efficiency in time to completion
- Describe abnormalities using the appropriate veterinary terminology at the physical and physiological levels in all species

4. Diagnosis: At the case level:

- Generate a problem list
- Generate differentials under broad categories
- Identify if further data is required

At the process level:

- Suggest common tests to be used to acquire data
- Perform some of the common tests
- Interpret test results

5. Treatment:

- Learn how to perform methods of treatment including: hazards & risks, asepsis, methods of administration, waste disposal
- Identify broad categories of treatment components at the case level
- Calculate doses for different situations at the process level including: drugs and fluid therapy
- Generate a treatment plan
- Write a prescription

6. Problem Solving:

- Use problem solving strategies to deepen understanding of abnormalities at both the physical and physiological levels
- Identify further data required to refine assessment
- Be able to prioritize information required for further understanding versus managing the case
- Communicate the process involved as problem solving advances
- Conduct problem solving activities at the level of the problem

7. Medical Record:

- Create a complete medical record that reflects the physical exam findings and history and includes current assessment etc. at the level of the problem

8. In order to advance student skills in the diagnostic process, specific intended learning outcomes for the Diagnostic Imaging and Neurology components are further defined below.

Diagnostic Imaging Component

Graduates of VETM*3440 Clinical Medicine II must be able to:

- Systematically review a radiograph.
- Describe a radiographic study (normal and abnormal findings) using appropriate imaging terminology.
- Provide a radiographic diagnosis for a given study.

Neurology Component

Graduates of VETM*3440 Clinical Medicine II must be able to:

- Perform a detailed neurological examination.
- Recognize the neuroanatomical pathways involved in each test performed during the neurological examination.
- Be able to differentiate whether or not the patient suffers a disease affecting the nervous system (neurological disease).
- Interpret the neurological examination findings for the purposes of lesion localization.
- Localize a suspected neurological lesion to one or several of the main components of the nervous system:
 - Spinal cord (and to specific spinal cord functional segments: C1-C5, C6-T2, T3-L3, L4-S3).
 - Peripheral nervous system, neuromuscular junction, and muscle
 - Brain (and to specific areas of the brain: thalamocortex, brainstem, cerebellum).
 - Vestibular system (peripheral vs central)
- Recognize the neurological signs related to specific lesion localization in the nervous system.

5 Teaching and Learning Activities

The course emphasizes clinical problem solving, with a focus on common presenting complaints encountered in large and small animal species. Each presenting complaint is experienced through use of a Problem-Oriented Medical Approach to evaluate both large and

small animal case material, to allow for comparative medicine among species. Diagnostic imaging instruction and practice is embedded within case modules, allowing students to directly apply these skills to case material. Students also extend their Phase I learning through modules focused on clinical nutrition and detailed neurological evaluation. This course is intimately tied to other Phase II courses, and students will be expected to know and apply content from those courses during their Clinical Medicine II learning. Content from other Phase II courses may therefore be examined during the final integrated Objective Standardized Clinical Examination (OSCE) at the end of the Clinical Medicine II.

Teaching Strategies:

MODULES:

Thematic modules are structured to provide content knowledge in advance of student practice of clinical problem-solving skills across the various domestic species. Each module may contain a combination of lectures, online learning materials, and laboratory practice sessions.

MODULE LECTURES

Lectures are scheduled throughout the course to strategically deliver preparatory knowledge in advance of practicing application of this knowledge in the laboratories. Lecture slides and/or accompanying detailed notes will be posted on the course website.

MODULE REQUIRED SELF-STUDY

Students are expected to study the additional course material posted on the course website (**VETM3440 Clinical Medicine II site on Courselink**) in advance of each module's associated laboratory session. These materials are intended to prepare students in order to optimize their evaluation of case material during the laboratory time.

MODULE LABORATORIES

1. This course involves a series of 10, clinically-oriented laboratories, plus 2 practical review laboratories prior to the final integrated OSCE. Each laboratory group consists of approximately ¼ of the class. Typically, each laboratory period will involve active practice of the skills outlined in the laboratory-specific intended learning outcomes.
2. Students are expected to adequately prepare for each laboratory prior to attending, by thorough review of the online supporting material provided for each module's lab topic. Students will also be expected to be familiar or become familiar with diagnostic testing and interpretation, using supporting materials posted on the course website (**VETM3440 Clinical Medicine II site on Courselink**) and from other Phase 2 courses.
3. Students are expected to review the laboratory-specific intended learning outcomes (posted on the course website) prior to attending each laboratory session, and to bring a copy to the laboratory to guide their learning.
4. Laboratories start promptly at the assigned time, therefore students are expected to arrive on time. **Due to the size of groups for each laboratory, we are not able to accommodate students attending a laboratory other than the one to which they are assigned, unless the student directly swaps with a classmate from another lab session in order to maintain consistent student numbers at each laboratory. There will be no opportunity to make-up any missed labs.**
5. Students must bring a stethoscope, penlight, digital thermometer, pen, and watch to every live-animal laboratory and to the final OSCE examination. Smart phones are not a suitable substitute for a watch.
6. Smart phone use for any purpose is prohibited during laboratory sessions.
7. No food or drink may be consumed in the animal use areas.
8. Obtaining a patient history, safe and humane animal handling, and routine physical examination are foundation skills that are required to conduct clinical problem solving. Students are expected to review their Phase I materials as needed to be proficient in these skills, and to regularly practice these skills on live animals during independent time outside of the scheduled course activities.
9. Students will be expected to resolve any learning issues that arise by discussion with laboratory instructors, classmates, or by consulting reference texts or other learning resources.

CLINICAL MEDICINE COMPONENT - POMA LABORATORIES

This component will present a review of the general physical examination, followed by 5 modules focused on clinical problem solving using a Problem-Oriented Medical Approach (POMA) to investigate common presenting complaints of large and small animal species. Laboratories will be delivered to ¼ of the class per session. Laboratory sections may be further subdivided into smaller groups to work through the cases and interact with the case materials. Preparatory learning ahead of case-based laboratories will include a combination of lectures and online self-study material, intended to prepare students for full engagement in the practice of clinical problem-solving using case material in laboratories. As well, during the Physical Examination laboratory sessions, live large animals will be available to practice the general physical examination. This is intended to provide time for students to review and refine their skills in the basic physical examination of large animals, and students will get the most out of this session by reviewing and practicing ahead of their lab in September. Students are expected to bring their own notes to all POMA laboratory sessions in order to work with the case material.

Supporting the clinical problem-solving POMA laboratories, students will receive specific learning opportunities focused on diagnostic imaging, neurology, small animal clinical nutrition, small mammal examination, and techniques for medicating or sampling animals. These are described below:

DIAGNOSTIC IMAGING COMPONENT

Seventeen lectures and two 2-hour laboratories will be held. The images for the laboratories will be available in electronic format for review prior to the class. For each laboratory session, the cases will be assigned to a group ahead of the laboratory session. The group will prepare a written report for the radiographic study to submit by the start of the lab slot, and will present the case to the class during the lab. Although the final diagnosis will be considered, emphasis will be placed on developing a systematic approach to review a radiograph, differentiating normal from abnormal, and providing a radiographic diagnosis.

NEUROLOGY COMPONENT

Ten lectures will be presented in this component of the course. The knowledge acquired from Phase 1 about performing a neurological examination will be reviewed and expanded to the next step of the neurological assessment. This involves

interpreting results of a neurological examination to identify whether or not a patient is suffering a neurological condition, and to localize that lesion to a specific area of the nervous system. This process is denominated "lesion localization" or "neurolocalization". Clinical cases presented as videos will be extensively used during the lectures. Additional online material for independent study will further allow students to evaluate small animal patients with or without neurological conditions. Knowledge gained during this course will act as a baseline for Phase 3 courses, where the most frequent neurological diseases in small and large animal species will be discussed.

SMALL ANIMAL CLINICAL NUTRITION COMPONENT

Seven lectures will be presented, applying principles of small animal nutrition to clinical contexts with a focus on life stages (gestation, lactation, growth, senior) and common issues such as obesity, allergies, osteoarthritis and dental problems. This content will be applied to clinical cases through the completion of a SA Clinical Nutrition Assignment.

SMALL MAMMAL COMPONENT

One introductory lecture, followed by a practical laboratory period, will be held. Restraint and common procedures will be introduced and practiced on models and cadaver specimens.

MEDICATION AND SAMPLING TECHNIQUES COMPONENT

One lecture, online self-study materials, and one 2-hour laboratory period will be held focused on medication and sampling techniques. Students will practice these techniques on models or live animals during the laboratory session. Opportunity for further practice will be provided during the Review Laboratory. Students may not practice medication and sampling techniques on live animals outside of these two instructor-supervised scheduled course laboratories.

EXPERIENTIAL LEARNING:

Experiential learning is also built into this course to support the skills learned in the course lectures and laboratories. Specifically, experiential learning will include the following mandatory components:

- Rotation through the Hill's Pet Nutrition Primary Healthcare Centre at OVC
- Phase 4 Shadowing in the OVC-Health Sciences Centre (Large and Small Animal weeks)

I. ROTATION THROUGH THE HILL'S PET NUTRITION PRIMARY HEALTHCARE CENTRE

The Hill's Pet Nutrition Primary Healthcare Centre (PHC) contains the Smith Lane Animal Hospital (SLAH), which is a fully functional primary care veterinary hospital. This rotation provides students with an experiential learning opportunity to clinically apply, reinforce and build upon their overall learning in the DVM curriculum. While participating in their assigned PHC rotation times (as per the DVM schedule), it is expected that students will conduct themselves as members of the PHC healthcare team and therefore will be expected to actively observe and/or participate in clinical activities occurring at the PHC.

There are **MANDATORY** and **OPTIONAL** components to the PHC learning experience:

Mandatory requirements:

1. All rotation shifts (7 hours in the Fall semester and 7 hours in the Winter semester) are **mandatory** as they are a part of the curriculum for the PHC, and make up the requirements needed to successfully complete Clinical Medicine II (VETM 3440). The **Phase 2 PHC Shift Attendance Sheet** must also be completed and submitted to Deep Khosa (assignment boxes located in the Population Medicine Administrative Offices). The attendance sheet can be found on the OVC 2022 Phase 2 SA Primary Care site on Courselink. The Phase 2 PHC Shift Attendance Sheet is not a numerically graded assignment, but will instead be marked as Complete or Incomplete.
2. Also **mandatory** is the completion of the **Clinical Skills Demonstration**

Assignment. Please see the Phase 2 Clinical Skills Demonstration Assignment on Courselink for instructions on how to complete this assignment. The Demonstration Assignment is not a numerically graded assignment, but will instead also be marked as Complete or Incomplete.

Optional for your learning experience: Students also have the option to complete **PHC Nutrition and Radiology assignments** for practice of their nutrition and radiology knowledge from Phases 1-2. Please see the PHC Nutrition and Radiology Assignment Introductions on OVC 2022 Phase – 2 SA Primary Care site on Courselink for details on how to complete these assignments. If submitted by the specified due date and time, students will receive a numeric grade for their optional PHC Nutrition and Radiology assignments, and **this grade will contribute to extra credit towards the student's overall VETM*3440 Clinical Medicine II grade.**

Given that the SLAH is a fully functional companion animal primary care practice that caters to the public, there is little control over what students may or may not experience in terms of watching appointments or helping with cases. If students are present at times when there are appointments to watch and/or help with, it is encouraged that this takes priority. At times when there are fewer appointment bookings and therefore less opportunity to watch or help with appointments, students are encouraged to use this time to complete their mandatory (and/or optional) assignments. Students can complete mandatory or optional assignments at any time - **either during or outside of their scheduled shifts.** Assignments can be submitted at any time, but no later than the final deadline as stated on the OVC 2022 Phase 2-SA Primary Care site on Courselink. Complete information about the assignments and learning at the PHC is also available on this site. Opening times for the PHC and SLAH can also be found on the PHC website. Students are encouraged and welcome to come to the PHC at any time when the PHC is open in order to complete either their mandatory or optional PHC course requirements.

Students must attend all assigned rotation times at the PHC and submit the PHC assignments to the assignment boxes in the Population Medicine Administrative Offices by **4pm on April 1, 2020**. Unless academic consideration has been granted from the Associate Dean – Students and Academic prior to this deadline, mandatory assignments submitted after this time will not be accepted. For all questions about PHC assignments and learning activities, please contact Dr. Deep Khosa (**dkhosa@uoguelph.ca**). All rotation-scheduling questions should also be sent to **dkhosa@uoguelph.ca**

2. CLINICAL SHADOWING IN THE OVC-HEALTH SCIENCES CENTRE (OVC-HSC):

Each Phase 2 student will be assigned two, 5-day (Monday evening through and including Friday evening) shifts during which they are paired up with a Phase 4 student on a clinical rotation (1 week on Large Animal, 1 week on Small Animal). During each assigned week of Clinical Shadowing, the Phase 2 student will accompany their Phase 4 partner during morning (before class time) and evening assessments of patients currently hospitalized in the OVC-HSC. Clinical Shadowing of Phase 4 students is intended to provide more practice of animal handling and restraint, physical examinations, patient assessments, and medical records. Students are encouraged to ask lots of questions in order to understand the cases and to affirm their clinical findings. **Phase 2 students may not administer any medications or treatments to hospital patients, and Phase 2 students must only handle and evaluate patients when in the presence of their Phase 4 partner.** The Phase 2 student must submit a **Clinical Shadowing Attendance sheet**, signed by the supervising Phase 4 student, to Jessica Mackinnon, OVC Dean's Office, Room 2651, after each 5-day shift of clinical shadowing is completed. The Clinical Shadowing Attendance sheet is found on the VETM3440 Clinical Medicine II Courselink website. The Clinical Shadowing schedule and detailed instructions will also be posted on the course website. Please note that attendance at all morning and evening shifts for the entire 5-day period each time is necessary in order to complete this course requirement. This component of the course is NOT optional – while there is no grade assigned to this portion of the course, full completion of all assigned shifts is required to pass VETM*3440 Clinical Medicine II. Therefore, if students have time conflicts and cannot attend all morning and evening times during their scheduled weeks, they are expected to find another classmate to switch with and inform the appropriate course co-ordinator (Large Animal: Dr. Hewson; Small Animal: Dr. Defarges) of such changes to the schedule.

SELF-STUDY & ACCESS TO ANIMALS FOR PRACTICE

To achieve a satisfactory skill level for successful completion of this course, students must take advantage of opportunities outside of scheduled laboratory time in order to practice performing physical examinations and to evaluate clinical material:

- Students may book time to independently practice in small groups outside of the Phase 2 schedule. Large animal species (cattle, horses, sheep) housed in Barn 37 will be accessible for practice outside of scheduled times only during regular working hours (Monday to Friday, 8am to 4pm),

provided that other courses are not using the animals or facility. Prior to large animal use for practice, permission must be obtained from Rob Leighton (labooking@uoguelph.ca), who will specify which animal(s) you may use. Please allow at least 2 business days in advance of your desired practice session when submitting animal use requests.

- Instructions for recording animal use after you have finished are posted in Barn 37 near each species. Diligent recording of animal use in this manner is essential in order to avoid inadvertent overuse of individual animals, as they are shared between multiple courses.
- For safety reasons, you must work together in groups of 3 or more students when practicing with the large animal species. Coveralls and steel-toed footwear are required.
- Some of the dogs used in this course are from the University of Guelph Central Animal Facility (CAF). These dogs are accessible for practice outside of laboratory time during CAF regular business hours. Please contact Annette Morrison at CAF (amorriso@uoguelph.ca) to arrange practice times.
- **NOTE THAT THE CLINICAL SKILLS BUILDING, BARN 37, AND ALL TEACHING HORSES/COWS/SHEEP WILL NOT BE AVAILABLE FOR PRACTICE OUTSIDE OF REGULARLY SCHEDULED LAB TIMES ON THE FOLLOWING DATES:**

March 2 - 6

March 16 - 20

March 31

April 2

April 6 - 9

The **Neurology Service** offers an optional, first-come-first-serve, clinical shadowing opportunity throughout the Fall and Winter semesters. The sign-up sheet will be posted outside the Neurology Service room (1282) in the Companion Animal Hospital. As spaces are limited, students are asked to remove themselves from the list if they choose not to attend the time slot that they have reserved (and/or let their classmates know).

The **Diagnostic Imaging Service** offers an optional, first-come-first-serve, clinical shadowing opportunity throughout the Fall and Winter semesters. This can be for just a few hours during the day depending on your schedule, and you will be working closely with a Phase 4 student. The sign-up sheet will be posted outside the Diagnostic Imaging room (1208) in the Companion Animal Hospital. As spaces are limited, students are asked to remove themselves from the list if they choose not to attend the time slot that they have reserved (and/or let their classmates know).

6 Assessments

METHODS OF ASSESSMENT

Clinical Medicine/POMA Component Assessments

An online quiz will evaluate student application of content within the POMA modules, including associated lectures, online preparatory material, and cases discussed in laboratory sessions. The online quiz is to be completed prior to the listed deadline posted on the VETM*3440 Clinical Medicine II Courselink site, and will contribute to the final course grade.

During the period when the quiz is open, the student can complete the quiz at any time. However, once starting the quiz, they must complete and submit it within the stated time limit of the quiz. Students that miss or fail the quiz will not be given the opportunity to take a supplemental quiz. Students that are unable to complete and submit the online quiz by the closing date will require documentation of academic consideration from the Office of the Associate Dean-Students and Academic, PRIOR TO missing the posted closing date, in order to redistribute the missed grade towards their final OSCE examination score, otherwise a mark of 0% will be assigned to the missed online quiz. Please note that students that initiate the quiz cannot then seek academic consideration for the quiz.

Students will also generate three written medical records based on their diagnostic work-up of laboratory cases. Additional instructions will be provided on the course website. The records are to be completed outside of laboratory hours and submitted prior to the listed deadlines on the VETM*3440 Clinical Medicine II Courselink site. One record will be written as a group (5 students), in order to receive formative feedback from a course instructor; the second record will be individually written and peer-reviewed for formative feedback, and the final record will be written as a group (5 students) and submitted for grading. Only those members of the group that participate in the assignment are to have their names on the assignment. **Students must have completed both formative case records by the posted deadlines in order to be eligible to receive a grade on their third medical record submission.** Any students that miss a POMA lab (where the cases for the medical record assignments are introduced) for a valid reason are expected to review the case material with classmates in order to still complete the assignment(s).

All material from the Clinical Medicine/POMA Component of the course will also be assessed on the final OSCE.

Diagnostic Imaging Component

Groups will be assigned to present cases in the imaging labs. The groups will be required to submit a single written report for the assigned case at the start of each lab and give an oral presentation of the case. The written report and oral presentation will contribute to the final

grade. Only those members of the group that participate in the assignment are to have their names on the assignment. Any students that miss the lab for a valid reason may have the opportunity to make-up the assignment if they contact the instructor PRIOR TO the missed laboratory time. If the instructor is not notified prior to the lab session or there is no approved absence, the grade will be zero.

Following each section (thorax, abdomen) there will be an in-class quiz (please see the Phase 2 schedule for the time and dates of these quizzes). **Missed quizzes will not be rescheduled, therefore, students that do not attend the in-class Diagnostic Imaging quizzes will require documentation of academic consideration from the Office of the Associate Dean-Students and Academic in order to redistribute the missed grade towards their Summative Written Diagnostic Imaging examination score, otherwise a mark of 0% will be assigned to any missed Diagnostic Imaging quizzes.**

There will also be a Summative Written Diagnostic Imaging Examination that will include all material taught in the course at the completion of all of the lectures and labs (please see the Phase 2 schedule for the time and date of this examination).

All Diagnostic Imaging quizzes, as well as the Summative Written Examination in Diagnostic Imaging, are computer-based exams. Therefore, students will need to bring a laptop to the examination room. If you do not have access to a computer please contact the lead contact (Dr. Nykamp F19, Dr. zur Linden W20) in advance of the examination and arrangements will be made to provide you with a computer or to take the examination in the computer lab.

Quizzes and the Summative Written Diagnostic Imaging Examination may be reviewed within three weeks after marks are posted for each. **There will not be an opportunity to review the quizzes or summative examination outside of this period.** To arrange a time to review the quizzes/summative examination, please contact the Administrative Assistant to the Faculty and Chair in the Department of Clinical Studies (ovcsas.clin@uoguelph.ca).

Neurology component

Evaluation will be based in part on a one-hour Summative Written Neurology Examination that will include a series of videos and images of neurological patients to be reviewed. Please see the Phase 2 schedule for the time and date of this examination.

The Summative Written Neurology Examination may be reviewed within three weeks after the marks are posted for this examination. **There will not be an opportunity to review the summative examination outside of this period.** To arrange a time to review the summative examination, please contact the Administrative Assistant to the Faculty and Chair in the Department of Clinical Studies (ovcsas.clin@uoguelph.ca).

All materials from the Neurology component of this course will also be examined on the final OSCE.

Small Animal Clinical Nutrition component

Evaluation will be based on completion of a written assignment. Details regarding the assignment and deadline are posted on the VETM*3440 Clinical Medicine 2 CourseLink site.

All materials from the Small Animal Clinical Nutrition component of this course will also be examined on the final OSCE.

Small Mammal and Medicating/Sampling Techniques components

Worksheets representing key learning outcomes will be completed within the relevant laboratory sessions. All materials from the Small Mammal and Medicating/Sampling Techniques components of this course will also be examined on the final OSCE.

FINAL INTEGRATED OBJECTIVE STANDARDIZED CLINICAL EXAMINATION (OSCE):

This OSCE examination will incorporate ALL course content from Clinical Medicine II, including all materials associated with course lectures, online materials on the course CourseLink website, laboratories, and other course-related assignments/activities. Related concepts from other Phase II courses may also be incorporated into the OSCE questions, as practiced throughout the POMA laboratories. The exam format will be a multi-station rotation, of which some stations will be written responses requiring application of knowledge to practical scenarios, and others will require one-on-one demonstration of skills on live animals in the presence of an examiner. The student will need to come prepared to work with all of the common domestic species encountered throughout the course (dog/horse/cow). As such, proper attire and equipment is required as outlined for the laboratory sessions.

CALCULATION OF THE FINAL COURSE GRADE: VETM*3440 CLINICAL MEDICINE II

The course consists of the following main components:

- Clinical Medicine/POMA Component (50%)
 - Physical examination
 - Clinical problem-solving (POMA: Problem-Oriented Medical Approach)
 - Handling and examination of small mammal species
 - SA Clinical nutrition
 - Medication/Sampling techniques

- Diagnostic Imaging Component (25%)
- Neurology Component (25%)

***NOTE: In order to achieve a passing overall grade for VETM3440: Clinical Medicine II, students must achieve ALL of the following:**

- At least 60% cumulative grade within each of the Clinical Medicine/POMA, Diagnostic Imaging, and Neurology components of this course.
 - Students that achieve less than 50% in one component will automatically be assigned a failing grade (49%, or their original course grade if lower than 49%) for the entire Clinical Medicine II course.
 - Students that achieve between 50-59% in one or more components of the course will be required to remediate and then complete a conditional repeat examination of the component(s) material. The conditional repeat examination will occur during the deferred examination period in May.
 - The format of the conditional repeat examination is the responsibility of the Clinical Medicine II instructors coordinating that component of the course. The format will be communicated to the student via email two weeks prior to the conditional repeat examination date. Students are responsible for their own remediation in preparation for the conditional repeat examination, and are expected to seek instructor feedback as part of this process. If a passing grade (60%) is achieved on the conditional repeat examination, then the original grade for that component will be used in calculating the student's overall course grade. Failure to achieve a passing grade (60%) on the conditional repeat examination of any component will result in the student automatically being assigned a failing grade (49%, or their original course grade if lower than 49%) for the entire Clinical Medicine II course.
- A grade of 60% or greater on the Clinical Subsection component of the final integrated OSCE.

Students who achieve less than 60% on the Clinical Subsection of the final integrated OSCE exam but still have at least 30/50 (60%) cumulative grade within the Clinical Medicine/POMA component of the course will be required to take a conditional repeat exam of that failed OSCE subsection. The conditional repeat examination will occur during the deferred examination period in May. The format of the conditional repeat examination is the responsibility of the Clinical Medicine II course coordinators, and will be communicated to the student via email two weeks prior to the conditional repeat examination date. Students are responsible for their own remediation in preparation for the conditional repeat examination, and are expected to seek instructor feedback as part of this process. If a passing grade (60% or higher) is obtained on the conditional repeat examination, the student will be assigned their original OSCE grade on that subsection for the purpose of calculating the final course grade. Any student that does not achieve 60% on the conditional repeat examination will be assigned a failing grade (49%, or their original course grade if lower than 49%) for the entire Clinical Medicine II course.

- Successful completion of both Clinical Shadowing weeks:
Students must complete all required shifts in their assigned Large Animal and Small Animal Clinical Shadowing Weeks, including submission of both signed Clinical Shadowing Attendance Sheets by **4pm on April 1, 2020** in order to successfully complete course requirements for Clinical Medicine II, unless academic consideration has been granted by the Associate Dean - Students and Academic. If all Clinical Shadowing requirements are not completed, a grade of 49% (or their original course grade if lower than 49%) will be assigned in Clinical Medicine II.

- Successful completion of the Primary Healthcare Centre mandatory course requirements:
All PHC rotation shifts (7 hours in the Fall Semester and 7 hours in the Winter Semester) must be completed and the Phase 2 PHC Shift

Attendance Sheet must be submitted by no later than **4pm, April 1, 2020**. Phase 2 PHC Shift Attendance Sheets submitted after this time will not be accepted, unless academic consideration has been granted by the Associate Dean - Students and Academic. The Phase 2 PHC Shift Attendance Sheet is not a numerically graded assignment, but will instead be marked as Complete or Incomplete.

The Clinical Skills Demonstration Assignment must also be completed and submitted by no later than **4pm, April 1, 2020**. Clinical Skills Demonstration Assignments submitted after this time will not be accepted, unless academic consideration has been granted by the Associate Dean - Students and Academic. The Demonstration Assignment is not a numerically graded assignment, but will instead be marked as Complete or Incomplete.

If either of the above mandatory components of the PHC course requirements are not met, a grade of 49% (or their original course grade if lower than 49%) will be assigned in Clinical Medicine II.

Marks from the optional PHC Nutrition and Radiology assignments will constitute extra credit marks towards the student's overall Clinical Medicine II course grade, provided that the student has successfully passed all of the course requirements prior to applying this extra credit. The extra credit will be applied as the final step in calculating the overall course grade. Students cannot receive greater than 100% for the course regardless of this extra credit.

Failure to achieve all of these requirements will result in a final overall course grade of 49% (or their original course grade if lower than 49%) being assigned regardless of marks attained in other sections of the course, and the student will fail the course.

6.1 Assessment Details

Clinical Medicine/POMA Component (50%)

-	Written Medical Record Assignment #3	4
-	Online Quiz – POMA Online materials (POMA Labs 1 – 5)	4
-	SA Clinical Nutrition Assignment	4
-	Clinical Shadowing – Small Animal Week	Complete

- Clinical Shadowing – Large Animal Week Complete
- Primary Healthcare Centre Mandatory Assignments (Phase 2 PHC Shift Attendance Sheet; Clinical Skills Demonstration Assignment) Complete
- OSCE Examination – Clinical Subsection 38

Diagnostic Imaging Component (25%)

- In-class Quiz – Thorax 2.5
- In-class Quiz – Abdomen 2.5
- Lab Assignments x 2 2.5
- Summative Written Diagnostic Imaging Examination 17.5

Neurology Component (25%)

- Summative Written Neurology Examination 12.5
- OSCE Examination – Neurology Subsection 12.5

OPTIONAL PHC Radiology and Nutrition Assignments (EXTRA CREDIT) (0%)

Optional PHC Nutrition and Radiology Assignments submitted by the posted deadline will be graded, with this grade representing extra credit towards the student's overall final course grade. Each assignment can count for up to 1.5% extra credit (ie. up to 3% total extra credit is possible) towards the final course grade. Students cannot achieve greater than 100% as an overall course grade.

7 Course Statements

7.1 Course Communication

The Courselink site for VETM*3440 Clinical Medicine II is the official method of communication between course co-ordinators/instructors and the class as a whole regarding all course-related matters. Students are therefore expected to check the course website regularly for bulletin postings. Students wishing to discuss general course matters with the

course co-ordinators/instructors should direct their queries through their class course representative. Individual communications should be sent directly by email to the appropriate course instructor/co-ordinator. Please note that instructors/co-ordinators have other competing commitments, so delays in responding may occur: responses may take up to 5 business days and students should not expect answers to emails on weekends or holidays.

7.2 Due Diligence

Safety in the clinic and barn is a priority at all times. In order to ensure safety of all participants, the safety procedures/guidelines provided by the instructor must be followed. It is the responsibility of each student to attend any safety orientation that is provided.

* NOTE: It is expected that students will conduct themselves in such a manner during this course that **neither personal, peer or instructor safety will be compromised, and animal safety and welfare will be optimized.** The expectation is that students will demonstrate confidence and common sense while working around and with domestic animals. Students are required to be able to recognize the common premonitory signs of aggressive or potentially aggressive behavior in all species encountered in this course, as well as situations that could precipitate such behavior. Students are expected to anticipate and take appropriate action to avoid human or animal injury at all times.

7.3 Case Access

You are encouraged to visit the OVC-HSC regularly to learn about the cases that are in hospital. However, you are NOT permitted to enter a stall (Large Animal) or remove an animal from its cage (Small Animal) and/or examine the patient **UNLESS YOU HAVE THE EXPRESS PERMISSION OF THE CLINICIAN IN CHARGE OF THE CASE.** This ruling is not designed to be restrictive, but is made in the best interests of the patient and you, and is meant to address issues of safety/security and to optimize patient recovery. Where access is denied, it will always be for a sound clinical and/or safety/security reason. **Please ensure that you are appropriately dressed when in the hospital wards and wear your personal identification badge. Also, work in groups of 2-3 when examining patients in the Large Animal Clinic.**

7.4 Client Confidentiality

At times in this course, students will work with client-owned animals. Please note that access to the clinical record is a **PRIVILEGE**, not a right, and must be protected. Students are reminded that all medical and patient information must be treated as **ABSOLUTELY CONFIDENTIAL and must NOT be discussed outside of the College.** In particular, the identity of clients and their animals must **NEVER** be divulged to anyone who does not have Medical Records privileges (see the OVC-HSC Policies and Procedures). Student postings of case pictures or descriptions of cases using social media is **strictly prohibited.**

7.5 Hygiene

Handwashing is the single most important procedure for preventing the spread of infections. Students are expected to incorporate this procedure as routine practice before and after patient contact or contact with animal bodily fluids, excretions/secretions or contaminated inanimate objects. Appropriate technique for effective handwashing as taught in Phase I VETM*3430 Clinical Medicine I is the standard expected throughout the DVM program.

***When handling client-owned large animal species, the use of gloves is required. Please also wash hands following removal of gloves.**

7.6 Biosecurity

The teaching animals are maintained in a closed-herd with strict biosecurity measures in place to prevent disease exposure. Coveralls and labcoats used in Principle of Disease laboratories or in the OVC-HSC on client-owned animals must therefore be appropriately laundered prior to wearing these to handle any of the OVC teaching herd animals. Similarly, coveralls and labcoats must be laundered following **each** Clinical Medicine laboratory before using them for other courses.

Before exiting Barn 37 or the Clinical Skills Building, thoroughly wash your boots with the boot brush and disinfectant solution that is provided. Hands should then also be properly washed.

Protective clothing (labcoats, scrubs, coveralls) used in laboratories are not to be worn outside of OVC.

7.7 Personal Attire when working with Large Animals

Students are required to wear **clean protective coveralls** for all Large Animal Laboratories, Large Animal Clinical Shadowing, and during independent practice time with large animals. As well, students are required by the University of Guelph safety policy to wear **approved safety boots or shoes (steel-toed)** at all times when working with large animal species. Long hair (shoulder length) must be tied back. Any hand, wrist or neck jewelry must be removed prior to attending the Large Animal labs. Students will **NOT** be permitted to participate in scheduled activities involving large animals if they do not comply. Lab coats are not permitted in the Large Animal Laboratories or during Clinical Shadowing in the Large Animal Clinic. Students must also wear their University Access Card that displays the student's name and colour strip of Phase year as their form of identification/name badge at all times in the OVC-HSC.

7.8 Personal Attire when working with Small Animals/Small Mammals

Students are required to wear **clean, long blue lab coats and closed-toe shoes** for all Small Animal and Small Mammal Laboratories, Small Animal Clinical Shadowing, and during independent practice time with small animals. Students must also wear their University Access Card that displays the student's name and colour strip of Phase year as their form of identification/name badge at all times in the OVC-HSC.

7.9 Personal Attire in the Hill's Pet Nutrition Primary Healthcare Centre

Students are required to wear clean, presentable "**business casual**" attire (see the Dress Standard document under PHC Day One Core Protocols and SOPs in the OVC 2022 Phase – 2 Companion Animal Primary Care Course link site for full details), their **long blue lab coat, closed-toe shoes**, and a **name badge** that clearly displays their first and last name. It is preferable that students wear their University Access Card that displays the student's name and colour strip of Phase year as their form of identification/name badge at all times in the PHC.

7.10 Digital Recording

Digital recording and photography are not permitted during lectures and laboratories in this course, or during independent practice time with the OVC teaching animals. Digital imaging of any client-owned animals, medical records, or cadaver specimens is strictly forbidden.

7.11 Inability to Meet a Course Requirement

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons, please contact the Associate Dean - Students and Academic (ADSA) by email (jhewson@uoguelph.ca). No exceptions to the course deadlines or examinations will be made without academic consideration being granted by the ADSA. This course statement supercedes the University Statement 8.2 noted below.

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 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>

8.3 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>

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 can be found on the SAS website
<https://www.uoguelph.ca/sas>

8.6 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>

8.7 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.

8.8 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>

