

# CLINICAL STUDIES

The Department of Clinical Studies offers graduate programs leading to MSc and DVSc degrees.

## Administrative Staff

### Chair

Carolyn Kerr (2141 OVC, Ext. 54051)  
ckerr@uoguelph.ca

### Graduate Program Coordinator

Adronie Verbrugge (2148 Clinical Studies, Ext. 54034)  
averbrug@uoguelph.ca

### Administrative Assistant to the Chair and Faculty

Vanessa Joy (2142 Clinical Studies, Ext. 54069)  
vjoy@uoguelph.ca

### Graduate Program Assistant

TBD (2509 Stewart Building, Ext. 54780)  
csgrad@uoguelph.ca (ovcsas.gradvsc@uoguelph.ca)

## Graduate Faculty

*This list may include Regular Graduate Faculty, Associated Graduate Faculty and/or Graduate Faculty from other universities.*

### Sarah Abood

B.Sc., DVM Michigan, PhD Ohio - Assistant Professor  
Associated Graduate Faculty

### Anthony C. G. Abrams-Ogg

BA Alberta, DVM Saskatchewan, D.V.Sc. Guelph, Dipl. ACVIM - Professor  
Graduate Faculty

### Ryan Appleby

B.Sc. Western Ontario, DVM Guelph - Assistant Professor  
Graduate Faculty

### Luis Arroyo

DVM Nacional, D.V.Sc., PhD Guelph - Associate Professor  
Graduate Faculty

### Hugues Beaufriere

DVM Lyon, PhD Louisiana - Associate Professor, University of California-Davis  
Associated Graduate Faculty

### Alexa Bersenas

B.Sc., DVM, M.Sc. Guelph, Dipl. ACVECC - Associate Professor  
Graduate Faculty

### Shauna Blois

B.Sc., Mount Allison, DVM Prince Edward Island, D.V.Sc. Guelph, Dipl. ACVIM - Associate Professor  
Graduate Faculty

### Brigitte Brisson

DMV Montreal, D.V.Sc. Guelph, Dipl. ACVS - Professor  
Graduate Faculty

### Nathalie Cote

DVM Montreal, D.V.Sc., Guelph - Assistant Professor

### Nicola Cribb

VetMB, MA Cambridge, D.V.Sc. Guelph, Dipl. ACVS - Assistant Professor

Associated Graduate Faculty

### Alice Defarges

DVM Alfort, M.Sc. Montreal, Dipl. ACVIM - Assistant Professor  
Graduate Faculty

### Pauline Delnatte

DVM Toulouse, D.V.Sc. Guelph, Dipl. ACZM - Clinical Veterinarian, Toronto Zoo  
Associated Graduate Faculty

### Christopher J. Dutton

B.Sc., B.V.Sc., M.Sc. UK, Dipl. ACZM, Dipl. ECZM - Head of Veterinary Services, Toronto Zoo  
Associated Graduate Faculty

### Sonja Fonfara

DVM Hanover, Dr med vet Justus-Liebig (Germany), PhD Helsinki, CertVC, Dipl. ECVIM - Associate Professor  
Graduate Faculty

### Luis Gaitero

DVM Barcelona, Diplomate ECVN - Associate Professor  
Graduate Faculty

### Sarah Gardhouse

BSc, DVM Guelph - Clinical Specialist, Heath Seivices  
Associated Graduate Faculty

### Thomas Gibson

B.Sc. Guelph, B.Ed. Windsor, DVM, D.V.Sc. Guelph, Dipl. ACVS, Dipl. ACVSMR - Veterinarian, Grand River Surgical Services  
Associated Graduate Faculty

### Diego Gomez

DVM, M.Sc. Colombia, MVSc Atlantic Veterinary, PhD Guelph, Dipl. ACVIM (LA) - Assistant Professor  
Graduate Faculty

### Joanne Hewson

DVM, PhD Guelph, Dipl. ACVIM (LA) - Associate Professor  
Graduate Faculty

### Mark B. Hurtig

DVM, M.V.Sc. Saskatchewan, Dip. ACVS - Retired Faculty  
Associated Graduate Faculty

### Fiona James

HB.Sc. Toronto, M.Sc. Western, DVM, D.V.Sc. Guelph, Dipl. ACVIM - Assistant Professor  
Graduate Faculty

### Monica Jensen

B.Sc., DVM, D.V.Sc. Guelph, Dipl. ACVR - Assistant Professor  
Graduate Faculty

### Carolyn L. Kerr

DVM, D.V.Sc. Guelph, PhD Western, Dipl. ACVAA - Professor and Chair  
Graduate Faculty

### Judith Koenig

DVM, M.Sc. Vet. Medicine (Austria), D.V.Sc. Guelph, Dipl. ACVS/ECVS - Associate Professor  
Graduate Faculty

### Cedric Larouche

DVM Montreal, D.V.Sc. Guelph - Staff Veterinarian, Toronto Zoo  
Associated Graduate Faculty

**Noel Moens**

DVM Liege (Belgium), M.Sc. Saskatchewan, Dipl. ACVS/ECVS - Associate  
Professor  
Graduate Faculty

**Anthony Mutsaers**

DVM Guelph, PH.D Toronto, Dip. ACVIM (Oncology) - Associate Professor  
Graduate Faculty

**Stephanie Nykamp**

DVM, M.Sc. Western, Dipl ACVR - Associate Professor and Associate  
Dean, Clinical Program  
Graduate Faculty

**Lynne O'Sullivan**

DVM Prince Edward Island, D.V.Sc. Guelph, Dipl. ACVIM - Associate  
Professor, Atlantic Veterinary College  
Associated Graduate Faculty

**Michelle Oblak**

DVM, D.V.Sc. Guelph, Dipl. ACVS - Assistant Professor  
Graduate Faculty

**Chantale Pinard**

DVM Guelph, MS Kansas State, Dipl. ACVO - Associate Professor  
Graduate Faculty

**Andrea Sanchez Lazaro**

DVM Murcia, D.V.Sc. Guelph - Assistant Professor  
Graduate Faculty

**Melissa Sinclair**

DVM Prince Edward Island, D.V.Sc. Guelph, Dipl. ACVAA - Associate  
Professor  
Graduate Faculty

**Ameet Singh**

B.Sc. Mount Allison, DVM Atlantic Veterinary, D.V.Sc. Guelph, Dipl. ACVS -  
Assistant Professor  
Graduate Faculty

**Henry Staempfli**

DVM, Dr. Med. Vet. Dipl. ACVIM - Retired Faculty, Clinical Studies,  
University of Guelph  
Associated Graduate Faculty

**E.A. Stone**

BA Scripps College, DVM UC Davis, MS Georgia, MPP Duke - Professor  
Emerita

**Donald Trout**

BS, DVM Washington State, PhD California, Dipl. ACVS - Associate  
Professor  
Graduate Faculty

**Alexander Valverde**

DVM Costa Rica, D.V.Sc. Guelph, Dipl. ACVAA - Associate Professor  
Graduate Faculty

**Adronie Verbrugghe**

B.Sc., DVM, PhD Ghent (Belgium), Dipl. ECVCN - Assistant Professor  
Graduate Faculty

**Laurent Viel**

DVM Montreal, M.Sc., PhD, Diploma in LAM Guelph - Professor Emeritus  
Associated Graduate Faculty

**J. Paul Woods**

DVM Guelph, MS Wisconsin, Dipl. ACVIM (Internal Medicine, Oncology) -  
Professor  
Graduate Faculty

**Alexander Zur Linden**

B.Sc. Simon Fraser, DVM Saskatchewan DACVR - Assistant Professor  
Graduate Faculty

## MSc Program

### Admission Requirements

Candidates must have either an honours baccalaureate degree or a  
DVM degree; licensure to practice veterinary medicine in Ontario is not  
required.

Candidates are accepted based on adequate background preparation and  
availability of an advisor in the area of interest. Applicants should contact  
potential faculty advisors with established research programs listed in  
the department website (<http://ovc.uoguelph.ca/clinical-studies/>).

Acceptance into the MSc thesis program will be dependent on stipend  
funding opportunities that may be available through faculty advisors,  
scholarships or sponsorship. There is usually no stipend support for MSc  
course work students.

### Program Requirements

Students enrol in one of two study options:

1. thesis, or
2. course work and major research paper.

### Thesis

The thesis option requires a minimum of 6 semesters (2 years) of full  
time study. The program provides focused research training in areas  
related to veterinary medicine. Research projects may examine aspects  
of clinical practice or concepts but are not considered discipline or  
specialty training.

The program involves a minimum of three 0.50 credit graduate level  
courses. Candidates are required to carry out an independent research  
study and produce a thesis. The course selection will be made by the  
student in consultation with the advisory committee and tailored to  
the student's particular research interest, and will be approved by the  
departmental Graduate Studies and Research Committee.

### Course Work and Major Research Project (MRP)

The course work option requires a minimum of 3 semesters (1 year) of  
full time study. The program provides course work and focused research  
training in areas related to veterinary medicine. Research projects may  
examine aspects of clinical practice but are not considered discipline or  
specialty training.

The course work plus major project option will comprise a minimum of  
4 credits, including six 0.5-credit graduate courses and a mandatory 1.0  
credit, 2-semester major project course. The major project course will  
be supervised by the student's advisory committee, and will consist of a  
literature review, participation in a research project related to veterinary  
medicine, preparation of a manuscript suitable for publication in a  
peer-reviewed scientific journal, and presentation in a Departmental

seminar. A mark will be assigned by the advisory committee, based on the manuscript and oral presentation.

There are no required courses beyond the 1.0 credit project course. The remaining courses will be chosen from courses within the Department of Clinical Studies and other courses provided across the University.

The course selection will be made by the student in consultation with the advisory committee and tailored to the student's particular research interest, and will be approved by the departmental Graduate Studies and Research Committee.

## DVSc Program

The DVSc degree is offered in large animal surgery, small animal surgery, large animal medicine, small animal medicine, anesthesiology, cardiology, neurology, ophthalmology, radiology, emergency and critical care, companion animal nutrition and avian and exotics medicine depending upon availability. The program provides advanced academic preparation in both clinical training and research and is a unique post-professional doctoral-level degree. The DVSc differs from PhD training by emphasizing the development of both clinical research and applied skills in the various areas of clinical specialization appropriate for preparation for specialty Board certification.

Doctor of Veterinary Science positions are usually funded positions, and are usually advertised and selected through the American Association of Veterinary Clinicians' website at [www.virmp.org](http://www.virmp.org) (<http://www.virmp.org>) which can be accessed in early October. The start date is early August. Occasionally specialty training positions become available and are advertised on our website and through appropriate veterinary channels.

The DVSc is currently an interdepartmental program and receives input from all academic departments in the Ontario Veterinary College (OVC):

- Biomedical Sciences,
- Clinical Studies,
- Pathobiology and
- Population Medicine.

## Admission Requirements

Minimum of Ontario Equivalent average of 'B' (73% minimum) or GPA 3.0/4.0 in a doctor veterinary medicine (DVM) program or equivalent which would allow the applicant to be eligible for licensure to practice veterinary medicine in Ontario. In addition a completed internship or equivalent is usually required.

## Program Requirements

This program involves two-thirds of the time in applied clinical practice, and one-third of the time taking a minimum of five 0.5-credit graduate courses, conducting a research project related to the veterinary specialty, a written and oral qualifying exam to be taken before the end of the 6<sup>th</sup> semester, writing a thesis in a publication ready format, and a thesis defense in front of an examination committee. Candidates are required to develop investigative skills in their chosen area of specialization by carrying out an original study, generally related to animal health. The results of the research must make a significant contribution to the candidate's area of specialization and be written up as a thesis. Five graduate level courses are required.

## Collaborative Specializations

Faculty in Clinical Studies also participate in the collaborative specializations in Neuroscience ([calendar.uoguelph.ca/graduate-](http://calendar.uoguelph.ca/graduate-)

[calendar/collaborative-specializations/neuroscience/](http://calendar.uoguelph.ca/graduate-calendar/graduate-programs/clinical-studies/graduate-calendar/collaborative-specializations/regenerative-medicine/)) and Regenerative Medicine ([calendar.uoguelph.ca/graduate-calendar/graduate-programs/clinical-studies/graduate-calendar/collaborative-specializations/regenerative-medicine/](http://calendar.uoguelph.ca/graduate-calendar/graduate-programs/clinical-studies/graduate-calendar/collaborative-specializations/regenerative-medicine/)).

## Courses

### CLIN\*6010 Clinical Medicine F Fall Only [0.50]

These are in-service clinical training courses based on case material presented to the student in the Veterinary Teaching Hospital. Under supervision, the student is expected to take primary responsibility for case management including decisions related to diagnosis, therapy and client/referring veterinarian communications. Case material studied in each course reflects a different clinical subspecialty commonly occurring in the Fall (F), Winter (W), and Summer (S) semesters respectively.

**Department(s):** Department of Clinical Studies

**Location(s):** Guelph

### CLIN\*6030 Clinical Medicine W Winter Only [0.50]

These are in-service clinical training courses based on case material presented to the student in the Veterinary Teaching Hospital. Under supervision, the student is expected to take primary responsibility for case management including decisions related to diagnosis, therapy and client/referring veterinarian communications. Case material studied in each course reflects a different clinical subspecialty commonly occurring in the Fall (F), Winter (W), and Summer (S) semesters respectively.

**Department(s):** Department of Clinical Studies

**Location(s):** Guelph

### CLIN\*6031 Clinical Medicine S Summer Only [0.50]

These are in-service clinical training courses based on case material presented to the student in the Veterinary Teaching Hospital. Under supervision, the student is expected to take primary responsibility for case management including decisions related to diagnosis, therapy and client/referring veterinarian communications. Case material studied in each course reflects a different clinical subspecialty commonly occurring in the Fall (F), Winter (W), and Summer (S) semesters respectively.

**Department(s):** Department of Clinical Studies

**Location(s):** Guelph

### CLIN\*6170 Clinical Surgery F Fall Only [0.50]

These are in-service clinical training courses based on case material presented to the student in the Veterinary Teaching Hospital. Under supervision, the student is expected to take primary responsibility for case management including decisions related to diagnosis, therapy and client/referring veterinarian communications. Case material studied in each course reflects a different clinical subspecialty occurring in Fall (F), Winter (W), and Summer (S) semesters respectively. The student is required to prepare a paper for publication in a recognized peer review journal based on clinical case material presented to the teaching hospital. As an alternative, the paper can be an in-depth review article on a clinically relevant topic.

**Department(s):** Department of Clinical Studies

**Location(s):** Guelph

**CLIN\*6180 Clinical Surgery W Winter Only [0.50]**

These are in-service clinical training courses based on case material presented to the student in the Veterinary Teaching Hospital. Under supervision, the student is expected to take primary responsibility for case management including decisions related to diagnosis, therapy and client/referring veterinarian communications. Case material studied in each course reflects a different clinical subspecialty occurring in Fall (F), Winter (W), and Summer (S) semesters respectively. The student is required to prepare a paper for publication in a recognized peer review journal based on clinical case material presented to the teaching hospital. As an alternative, the paper can be an in-depth review article on a clinically relevant topic.

**Department(s):** Department of Clinical Studies

**Location(s):** Guelph

**CLIN\*6181 Clinical Surgery S Summer Only [0.50]**

These are in-service clinical training courses based on case material presented to the student in the Veterinary Teaching Hospital. Under supervision, the student is expected to take primary responsibility for case management including decisions related to diagnosis, therapy and client/referring veterinarian communications. Case material studied in each course reflects a different clinical subspecialty occurring in Fall (F), Winter (W), and Summer (S) semesters respectively. The student is required to prepare a paper for publication in a recognized peer review journal based on clinical case material presented to the teaching hospital. As an alternative, the paper can be an in-depth review article on a clinically relevant topic.

**Department(s):** Department of Clinical Studies

**Location(s):** Guelph

**CLIN\*6190 Neurology Fall Only [0.50]**

Basic principles of lesion localization in the domestic species with discussions of diagnostic problems in veterinary neurology.

**Restriction(s):** Instructor consent required.

**Department(s):** Department of Clinical Studies

**Location(s):** Guelph

**CLIN\*6200 Concepts and Application of Infection Control Unspecified [0.50]**

This course will involve principles of infection control in veterinary hospitals, drawing heavily from information from human medicine and evaluating human information in a veterinary context.

**Department(s):** Department of Clinical Studies

**Location(s):** Guelph

**CLIN\*6270 Applied Surgical Principles Unspecified [0.25]**

General surgical principles associated with surgical and related treatment of various body systems. This is an applied course with laboratory and written components. Students must have prior surgical training prior to registering for this course.

**Department(s):** Department of Clinical Studies

**Location(s):** Guelph

**CLIN\*6310 Advanced Equine Veterinary Orthopaedics Orthopaedics Unspecified [0.50]**

This course will provide the student with an in-depth understanding of orthopaedic practice and will facilitate revision of materials to prepare board certification.

**Restriction(s):** Instructor consent required.

**Department(s):** Department of Clinical Studies

**Location(s):** Guelph

**CLIN\*6330 Advanced Principles of Diagnostic Imaging Unspecified [0.50]**

This course is intended for students pursuing a career in veterinary radiology. Using a lecture-discussion format, the science of x-ray production and the fundamentals of other diagnostic imaging modalities will be presented. The specific applications of these techniques to research and clinical situations will be investigated.

**Department(s):** Department of Clinical Studies

**Location(s):** Guelph

**CLIN\*6350 Advanced Radiology I Summer, Fall, and Winter [0.50]**

Radiographic changes seen in diseases of the thorax and abdomen are demonstrated by using radiographs. Contrast and special studies are included where applicable.

**Department(s):** Department of Clinical Studies

**Location(s):** Guelph

**CLIN\*6370 Advanced Radiology II Fall Only [0.50]**

A continuation of CLIN\*6350, covering radiographic abnormalities of the neurological and skeletal systems.

**Department(s):** Department of Clinical Studies

**Location(s):** Guelph

**CLIN\*6380 Electrocardiography in Domestic Animals Summer, Fall, and Winter [0.50]**

This course will deal with the study of the electrocardiography of the cat, dog, cow and horse. Students will review the mechanisms of arrhythmogenesis and the role of anti-arrhythmic agents in the control of arrhythmogenesis.

**Department(s):** Department of Clinical Studies

**Location(s):** Guelph

**CLIN\*6420 Anesthesiology I Summer Only [0.50]**

A course in advanced veterinary anesthesia and allied topics such as fluid, acid-base, and electrolyte balance, shock therapy, and cardio pulmonary resuscitation.

**Department(s):** Department of Clinical Studies

**Location(s):** Guelph

**CLIN\*6440 Anesthesiology II Summer, Fall, and Winter [0.50]**

A discussion, reading and investigative course on research methods in comparative anesthesiology.

**Prerequisite(s):** CLIN\*6420

**Department(s):** Department of Clinical Studies

**Location(s):** Guelph

**CLIN\*6460 Anesthesiology III: Species Specific and Coexisting Disease Considerations Fall and Winter Reg Required [0.50]**

A course in advanced veterinary anesthesia that focuses on the scientific literature related to the anesthesia of specific species and veterinary patients with varying underlying diseases.

**Prerequisite(s):** CLIN\*6420 and CLIN\*6440

**Department(s):** Department of Clinical Studies

**Location(s):** Guelph

**CLIN\*6550 Small Animal Internal Medicine I Unspecified [0.50]**

This is a graduate course designed for DVSc students and residents pursuing further study in the area. The basis of the course is the acquisition and application of knowledge of the pathophysiologic mechanisms of disease. The subject area(s) will be one or two organ systems, which will not be repeated in either CLIN\*6550 or CLIN\*6560 over a 3-year period.

**Department(s):** Department of Clinical Studies

**Location(s):** Guelph

**CLIN\*6560 Small Animal Internal Medicine II Unspecified [0.50]**

This is a graduate course designed for DVSc students and residents pursuing further study in the area. The basis of the course is the acquisition and application of knowledge of the pathophysiologic mechanisms of disease. The subject area(s) will be one or two organ systems, which will not be repeated in either CLIN\*6550 or CLIN\*6560 over a 3-year period.

**Department(s):** Department of Clinical Studies

**Location(s):** Guelph

**CLIN\*6570 Large Animal Internal Medicine I Winter Only [0.50]**

Advanced study in general medicine and pathophysiologic principles of disorders of the gastrointestinal and urinary systems in ruminants, swine and horses.

**Department(s):** Department of Clinical Studies

**Location(s):** Guelph

**CLIN\*6580 Large Animal Internal Medicine II Winter Only [0.50]**

Advanced study in general medicine and the pathophysiologic principles of disorders of the cardiovascular, respiratory and musculo-skeletal systems of ruminants and horses.

**Department(s):** Department of Clinical Studies

**Location(s):** Guelph

**CLIN\*6590 Large Animal Internal Medicine III Winter Only [0.50]**

Advanced study in general medicine and the pathophysiologic principles of neonatal disorders and disorders of the nervous system, skin and general systemic disorders.

**Department(s):** Department of Clinical Studies

**Location(s):** Guelph

**CLIN\*6600 Equine Soft Tissue Surgery I Summer, Fall, and Winter [0.50]**

Based on required reference reading, every other week discussion will cover advanced soft tissue procedures performed in equine surgery. Guest lectures on selected topics will be presented. Laboratory will be given.

**Department(s):** Department of Clinical Studies

**Location(s):** Guelph

**CLIN\*6610 Equine Soft Tissue Surgery II Summer, Fall, and Winter [0.50]**

Based on required reference reading, every other week discussion will cover advanced soft tissue procedures performed in equine surgery. Guest lectures on selected topics will be presented. Laboratory will be given.

**Department(s):** Department of Clinical Studies

**Location(s):** Guelph

**CLIN\*6620 Ruminant Surgery Winter Only [0.50]**

Through lectures/seminars, medical and surgical laboratories, and detailed case discussions, this course provides practical experience in ruminant medical, radiological and surgical procedures and in problem-solving related to ruminant practice.

**Department(s):** Department of Clinical Studies

**Location(s):** Guelph

**CLIN\*6661 Respiratory Physiology & Pathophysiology Unspecified [0.50]**

This is a graduate course designed for veterinarians pursuing advanced training in residency and DVSc programs. The course will cover normal respiratory anatomy, physiology and pulmonary function. A focus on respiratory pathophysiology will include respiratory failure, oxygen therapy and positive pressure ventilation.

**Department(s):** Department of Clinical Studies

**Location(s):** Guelph

**CLIN\*6670 Structure and Function of Animal Skin Summer, Fall, and Winter [0.50]**

A review of structure and function of skin in veterinary dermatology including the epidermis, dermis, subcutis and adnexal tissue. Application of knowledge in a clinical setting will follow with attention to modalities that will improve the epidermal barrier

**Restriction(s):** Instructor consent required.

**Department(s):** Department of Clinical Studies

**Location(s):** Guelph

**CLIN\*6680 Readings in Cardiology I Summer, Fall, and Winter [0.50]**

Original articles, review articles and textbook chapters dealing with the most recent concepts of pathophysiology, diagnostic procedures and therapeutic advancements will be reviewed, analyzed and discussed.

**Department(s):** Department of Clinical Studies

**Location(s):** Guelph

**CLIN\*6690 Readings in Cardiology II Summer, Fall, and Winter [0.50]**

Readings in Cardiology II will be a continuation of the format of Readings in Cardiology I with further readings in clinical cardiology.

**Department(s):** Department of Clinical Studies

**Location(s):** Guelph

**CLIN\*6700 Pathophysiology in Small Animal Surgery I Summer, Fall, and Winter [0.50]**

Based on required reference reading, weekly discussions will cover the disease mechanisms involved in medical problems commonly encountered in small animal surgical practice. Guest lectures on selected topics will be presented.

**Department(s):** Department of Clinical Studies

**Location(s):** Guelph

**CLIN\*6710 Pathophysiology in Small Animal Surgery II Summer, Fall, and Winter [0.50]**

Based on required reference reading, weekly discussions will cover the disease mechanisms involved in medical problems commonly encountered in small animal surgical practice. Guest lectures on selected topics will be presented.

**Department(s):** Department of Clinical Studies

**Location(s):** Guelph

**CLIN\*6800 Surgical Oncology Procedures Fall and Winter [0.50]**

This is a combined reading and laboratory course that will cover the major surgical oncology procedures. The relevant readings will be covered, followed by a cadaver laboratory to teach the students the important features of each procedure.

**Offering(s):** Offered alternate years

**Restriction(s):** Instructor consent required.

**Department(s):** Department of Clinical Studies

**Location(s):** Guelph

**CLIN\*6910 Professional Veterinary Communication Competencies Fall and Winter Reg Required [0.50]**

This course assists learners in developing professional competencies in several critical areas of professional veterinary practice: 1) the veterinary-patient-client relationship; 2) the preparation and delivery of professional seminars; and 3) clinical teaching in small groups.

**Restriction(s):** Restricted to Clinical Studies students.

**Department(s):** Department of Clinical Studies

**Location(s):** Guelph

**CLIN\*6950 Special Topics in Clinical Studies Summer, Fall, and Winter [0.50]**

**Restriction(s):** Restricted to Clinical Studies students.

**Department(s):** Department of Clinical Studies

**Location(s):** Guelph

**CLIN\*6960 Special Topics in Zoological Medicine Fall and Winter [0.50]**

Preparation for the ACZM examination and based on the published ACZM examination reading list. Students will prepare reading assignments that will be discussed during scheduled time. Each semester will focus on a specific taxon group. A mock examination will be provided on an ACZM sub-specialty (typically birds, reptiles, wildlife, terrestrial mammals or aquatic medicine).

**Restriction(s):** Instructor consent required.

**Department(s):** Department of Clinical Studies

**Location(s):** Guelph

**CLIN\*6970 Neurology II Unspecified [0.50]**

Advanced study in neurolocalization with a focus on functional neuroanatomy and diagnostic procedures in the domestic species. This two-semester course.

**Restriction(s):** Instructor consent required.

**Department(s):** Department of Clinical Studies

**Location(s):** Guelph

**CLIN\*6990 Project in Clinical Studies Summer, Fall, and Winter [1.00]**

This course involves participation in a clinical research project or clinical retrospective study. A review of the relevant literature will be performed. A manuscript suitable for publication in a peer-reviewed journal will be prepared, and the study will be presented in a departmental seminar.

**Restriction(s):** Restricted to Biomedical Sciences MSc coursework/MRP students.

**Department(s):** Department of Clinical Studies

**Location(s):** Guelph