

CLIN*6420 Anesthesiology I Winter [0.50]

Title:

Physiology

Coordinator/organizer:

This course focuses on physiology of the different species. It is being offered to graduate veterinary students pursuing advanced training in Doctorate of Veterinary Science in the areas of anesthesia, critical care, cardiology, internal medicine, and surgery.

The course will provide the graduate student with the opportunity to review the physiology of the different systems and differences between species to better understand the impact of anesthetic drugs and anesthetic management.

1. Course Objectives:

- 1) Understand the physiology of the different systems and organs
- 2) Describe the impact of anesthetic drugs on the physiology of the different systems
- 3) Describe the impact of disease on the physiology of the different systems

2. Material to be covered:

This course consists of topic assignment and presentations with discussion. One topic per week.

Each student will be assigned two to three (2-3) topics for their presentations, which should be prepared in a concise and schematic way, with a handout that will allow the participants to have a summary of the topics at the end of the course. All graduate students enrolled and auditing the course will be assigned presentations. Some of the course topics will be presented by Faculty and also attend sessions as to provide feedback and participate in topic discussion.

The following format is recommended for preparing the presentation:

- 1) Description of the system and its physiology
- 2) Impact of disease on the system
- 3) Impact of anesthetics and other drugs on the system
- 4) Monitoring of the system during anesthesia
- 5) Current veterinary literature

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The following are suggested topics that will be used for the assignment of the 2-3 topics:

Cardiovascular system

Lecture 1

- Autonomic system

Lecture 2

- Heart as a pump

Lecture 3

- Vascular system
- Parameters
- Drugs and effects

Respiratory system

Lecture 4

- Mechanics and Volumes

Lecture 5

- V/Q and gas exchange
- Transport in circulation

Lecture 6

- Regulation of respiration
- Pulmonary circulation
- Drugs and effects

Urinary system

Lecture 7

- Kidney anatomy and circulation

Lecture 8

- Clearance and absorption
- Parameters
- Drugs and effects

Lecture 9

- Acid-base regulation
- Body fluids and electrolytes

Central nervous system

Lecture 10

- Autoregulation
- Cerebral blood flow
- CSF
- Drugs and effects

Lecture 11

- Pain
- Drugs and effects

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Peripheral neuromuscular system

Lecture 12

- Contraction/relaxation
- Drugs and effects

Endocrine system

Lecture 13

- Adrenal glands
- Hypophysis
- Thyroid and Parathyroid glands
- Pancreas

3. Method of Evaluation:

Assigned topics	40%
Written examination-	60%

4. References:

- Current Scientific Journals
- *Cunningham's Textbook of Veterinary Physiology, 5th Edition
- Guyton and Hall Textbook of Medical Physiology, 12th Edition
- Other pertinent articles or textbook chapters

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Standard Statements – Graduate Course Outlines

The following are standard statements for inclusion on all course outlines (adapted with permission from the College of Arts). Some departments or colleges may also elect to post this information on a common website and link to such sites in the course outline. However, it is strongly recommended that statements on academic misconduct and links to the academic misconduct section of the academic calendars be included in all course outlines.

E-mail Communication

As per university regulations, all students are required to check their <uoguelph.ca> e-mail account regularly: e-mail is the official route of communication between the University and its students.

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 in writing, with your name, id#, and e-mail contact. See the graduate calendar for information on regulations and procedures for Academic Consideration:

http://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/sec_d0e1400.shtml

Drop Date

The last date to drop one-semester courses, without academic penalty, is DATE HERE. Two-semester courses must be dropped by the last day of the add period in the second semester. Refer to the Graduate Calendar for the schedule of dates:

<http://www.uoguelph.ca/registrar/calendars/graduate/current/sched/sched-dates-f10.shtml>

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. The Academic Misconduct Policy is detailed in the Graduate Calendar:

http://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/sec_d0e1687.shtml

Recording of Materials

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Presentations which are made in relation to course work—including lectures—cannot be recorded in any electronic media without the permission of the presenter, whether the instructor, a classmate or guest lecturer.

Resources

The Graduate Calendar is the source of information about the University of Guelph's procedures, policies and regulations which apply to graduate programs:

<http://www.uoguelph.ca/registrar/calendars/graduate/current/>