

W19 CLIN*6950 Special Topics Graduate Course: Veterinary Neuroanatomy

W19-S19 CLIN*6970 Neurology II – focus on neuroanatomy

Course Coordinators

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Objectives

By the end of this course, participants will be able to:

- A. Explain the physiology and anatomy of the brain, spinal cord, peripheral nerves, and muscles of the dog and cat from the functional perspective.
- B. Understand how the pathways and functional organization of the nervous system correspond with the clinical manifestations of lesions.

All classes are moderated by a faculty member. Class participants will take turns presenting information related to the topic during the class each meeting (assigned at the start of the course), drawing on the recommended reference texts and the current literature.

Reference Texts

De Lahunta, A; Glass, E; Kent, M	Veterinary Neuroanatomy and Clinical Neurology, latest ed.
Evans, HE	Miller's Anatomy of the Dog, latest ed.
Hall, J	Guyton and Hall Textbook of Medical Physiology, latest ed.
King, AS	Physiological and Clinical Anatomy of the Domestic Mammals: Central Nervous System, Vol. 1, latest ed.
Piermattei, DL	An Atlas of Surgical Approaches to the Bones and Joints of the Dog and Cat, latest ed.
Thomson, C; Hahn, C	Veterinary Neuroanatomy, A Clinical Approach
Uemura, E	Fundamentals of Canine Neuroanatomy and Neurophysiology, latest ed.

Outline

All classes run from 08:30 to 10:00, except where specified.

	Date	Topic	Moderator
1	28.09.2018	Cellular structure & function: cell membranes, types of neurons, astrocytes, oligodendrocytes, choroid epithelium, CSF production, ependymal cells, Schwann cells, myocytes, muscle spindles, Golgi tendon organs, synapses, NMJ & Spinal Reflex Circuits	Leonardi (James)
2	5.10.2018	Gross structure (skull, brain, spinal cord, vertebral column, peripheral nerves, muscle), arterial supply to CNS, venous drainage of cord & brain, Meninges, CSF circulation	Luca (James)
3	12.10.2018	Functional topography of the thalamocortex	McCarthy (James)
4	26.10.2018	Rhinencephalon & the limbic system	Ahmed (James)
5	2.11.2018	Motor systems I: pyramidal, extrapyramidal, executive function, basal nuclei & corpus striatum	Hazenfratz (Gaitero)
6	16.11.2018	Motor systems 2: pyramidal, extrapyramidal, executive function, basal nuclei & corpus striatum	Marchal (Gaitero)
7	7.12.2018	Ascending sensory systems 1: visceral afferent, medial lemniscus, SC white matter	Castillo (Gaitero)
8	11.01.2019	Ascending sensory systems 2: SC grey matter, spinocerebellar, cerebellum	Marchal (Gaitero)
9	18.01.2019	Vestibular & auditory systems	Hazenfratz (Gaitero)
10	15.02.2019	Vision	McCarthy (James)
11	1.03.2019	Other cranial nerves & senses (olfaction, taste)	Luca (James)

12	15.03.2019	Autonomic nervous system 1: sympathetic, parasympathetic	Ahmed (James)
13	29.03.2019	Autonomic nervous system 2: lacrimation, micturition, defecation	Leonardi (Gaitero)
	12.04.2019	EXAMINATION	

Expectations

All class participants are:

1. Expected to attend the sessions and participate in discussions.
2. Encouraged to review the recommended readings prior to attending the session.
3. Required to present a topic at least once for which they will be assessed a grade based on content, organization, and presentation skills. If more than one session is presented, all will be graded, and the higher grade of the presentations will be assessed.
4. Encouraged to select additional readings from the current literature to use in their presentations.
5. Required to provide a copy of their presentation materials to other class participants.
6. Required to submit 3 multiple choice questions per presentation to be considered for the final examination.

Grade

Examinations officially scheduled for April 8 through April 18, 2019

Participation and attendance – 25%

Presentations – 25%

Final examination – 50%

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:

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml>

Drop Date

The last date to drop one-semester courses, without academic penalty, is March 8, 2019. Refer to the Graduate Calendar for the schedule of dates:

<https://www.uoguelph.ca/registrar/calendars/graduate/current/sched/index.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:

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml>

Recording of Materials

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.