

# GRADUATE NEUROANATOMY

Neurobiology & Anatomy 7710 / Neuroscience 6060

Autumn 2008

Dates: Tuesdays and Thursdays beginning August 28  
Time: 1-2:30 p.m.  
Place: Rm. 408/410 MREB (Neurobiology & Anatomy Conference Rm.)  
Instructors: Monica Vetter, Scott Rogers, Suzanne Stensaas, Stephen Voron, Josh Bonkowsky and John Hoffman  
Format: Lectures and laboratory sessions  
Testing: Three exams and one term presentation  
Textbook: D.E. Haines, *Fundamental Neuroscience 3<sup>rd</sup> Ed.*, 2006  
Pre-requisites: None; open to all graduate students and postdoctoral fellows  
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## Course Schedule

August	28	Part I	Introduction (MV): basic plan, embryology, ventricles, vasculature (SS)
August	28	Part II	Orientation to the brainstem and cranial nerves (SS)
September	2		Orientation to the peripheral nervous system and spinal cord (MV)
	4		Orientation to the forebrain (MV)
	9		Laboratory 1: cranial nerves, vessels, lobes and midsagittal gross anatomy, spinal cord
	11		Motor systems: descending systems (upper and lower motor neurons) (SS)
	16		Motor systems: basal ganglia and cerebellum (JB)
	18		exam
	23		Somatic sensation: dorsal column/medial lemniscus (MV) – <b>reschedule!!</b>
	25		Somatic sensation: interoception (spinothalamic system) (MV)
	30		Visual system (MV)
October	2		Taste and olfactory system (SR)
	7		Auditory & vestibular (SR)
	9		Laboratory 2: Motor and sensory pathways, cortical functional anatomy
	14		Semester break
	16		Semester break
	21		Imaging methods (JH)

	23	exam
October	28	Hypothalamus (SV)
	30	Hippocampus (SR)
November	4	Laboratory 3: limbic system
	6	Amygdala/septal integration (SR)
	11	Comparative neuroanatomy I (SR)
	13	Comparative neuroanatomy II (SR)
	18	Neurobiology of disease/neuroimmunology (SR)
	20	Neurobiology of disease (JB)
	25	exam
	27	Thanksgiving Holiday; no class
December	2	term project presentations
	4	term project presentations
	9	term project presentations
	11	term project presentations

### **Other Course Information**

Reading. Aside from D.E. Haines's *Fundamental Neuroscience for Basic and Clinical Applications, 3rd Ed.* (Churchill Livingstone, 2006, ISBN-13# 978-0443067511), which is required, we can recommend John H. Martin's *Neuroanatomy: Text and Atlas, 3rd Edition* (Appleton & Lange, 2003, 978-0071212373) and John Nolte's *The Human Brain, 3rd Ed.* (Mosby, 2002, 978-0323013208), both of which have good diagrams in styles very different from that in Haines. A number of other neuroanatomy books are on closed reserve at Eccles Library for the concurrent Medical Neuroanatomy course. Although a brain atlas is not required, should you wish to consult one we recommend *The Human Brain in Photographs and Diagrams, 3rd Ed.* by John Nolte and Jay B. Angevine (Mosby, 2007) and *Neuroanatomy: An Atlas of Structure, Sections, and Systems, 7th Ed.* by D.E. Haines (Lippincott, Williams and Wilkins, 2007). We have found that students prefer to purchase a textbook online so we do not have the university bookstore stock textbooks for this class. However, the Health Sciences Bookstore usually has some copies available for sale. Additional readings from the literature will be assigned for some lectures.

Laboratories. There will be three laboratory sessions, held in the teaching lab on the east side of the 4th floor of the Health Sciences Education Building, during which the instructors will help you dissect preserved human brains and identify structures of interest. Gloves and dissecting tools will be provided at each lab; lab-coats are not required but you may wish to bring one.

Testing and Grading. There will be one term presentation that will be scheduled during the semester and three written examinations covering material presented in the lectures, labs and readings. The last two exams are not comprehensive except insofar as topographic anatomy is required to answer the questions. An overall average of 70% correct or 1.5 standard deviations below the class mean score (whichever is lower) is required to pass the course.

Course Web-Site. There is a site for the course on the university's Web-CT site, accessible from the main university web-page with your student ID or a special code given to auditors who request it from the instructor. The course syllabus, reading assignments, lecture notes, lecture PowerPoints, assigned readings, lab manual, test results and grades will be posted on this website.