

GRADUATE NEUROANATOMY

Neurobiology & Anatomy 7710 / Neuroscience 6060

Fall 2019

| | |
|-----------------|--|
| Dates: | Tuesdays, Thursdays and Friday beginning August 20 |
| Time: | 10:45-11:35 AM (end time is approximate) |
| Place: | HSEB 2948 |
| Instructors: | KC Brennan – 1 lecture Melissa Cortez - 1 lecture Michael Deans – 1 lecture Adam Douglass – 2 labs, 1 lecture Richard Dorsky – 2 labs, 1 lecture Chuck Dorval – 2 lectures Chris Gregg - 1 lecture Keith Jones – 1 lecture Daniel Lathen – 1 lecture Patrick Parker – 1 lecture Monica Vetter – 2 lectures Matt Wachowiak – 3 lectures Peter West – 1 lecture 2 total labs, 17 lectures |
| Format: | Lectures and laboratory sessions |
| Testing: | 2 Exams |
| Suggested Text: | D.E. Haines, <i>Fundamental Neuroscience for Basic and Clinical Applications</i> |
| Pre-requisites: | Open to all graduate students and postdoctoral fellows; Undergraduates by permission |
| e-mail contact: | adam.douglass@neuro.utah.edu (Course Organizer) drlathen@gmail.com (Daniel Lathen, TA) |

Course Web site: Canvas; access through Campus Information Service

Course Schedule

| Date | Day | Instructor | Lecture |
|---------|--|-------------------|---|
| 8/19/19 | Monday | | Beginning of fall term |
| 8/20/19 | Tuesday | Parker | Introduction: Basic plan, embryology, ventricles, vasculature |
| 8/22/19 | Thursday | Wachowiak | Brainstem and cranial nerves I, Medulla |
| 8/23/19 | Friday | Wachowiak | Brainstem and cranial nerves II, Pons & Midbrain |
| 8/27/19 | Tuesday, NOTE: 10:45- 12:15 PM | Dorsky & Douglass | <i>Lab 1 – HSEB 4300:</i> Cranial and Spinal nerves, Vessels, Cerebral Hemispheres HyperBrain Ch. 1: The Cranial Nerves and the Circle of Willis; Ch. 2: The Cerebral Hemispheres <i>Note this lab will take 1.5 hours.</i> |
| 8/29/19 | Thursday | Cortez | Peripheral and Autonomic Nervous Systems; Spinal Cord |
| 8/30/19 | Friday | Gregg | Forebrain (Cortex and Thalamus) |
| 9/3/19 | Tuesday | Deans | Vestibular and Auditory Systems |
| 9/5/19 | Thursday | Dorsky | Vision |
| 9/6/19 | Friday | Vetter | Sensory Systems – Spinothalamic tract |
| 9/10/19 | Tuesday | Vetter | Sensory Systems – Dorsal column medial lemniscus pathway |
| 9/12/19 | Thursday | Wachowiak | Olfaction and gustation |
| 9/13/19 | Friday | ---- | EXAM 1 |
| 9/17/19 | Tuesday | Lathen | Motor systems – Upper and Lower |
| 9/19/19 | Thursday | Dorval | Motor systems – Basal Ganglia |
| 9/20/19 | Friday | Dorval | Cerebellum |
| 9/24/19 | Tuesday | Douglass | Hypothalamus |
| 9/26/19 | Thursday | Dorsky & Douglass | <i>Lab 2 – HSEB 2938:</i> Sensory Pathways and Cortical Anatomy HyperBrain Ch. 3: Coronal Sections & Ventricular System |

| | | | |
|---------|----------|---------|----------------------------------|
| | | | |
| 9/27/19 | Friday | Brennan | Limbic System |
| 10/1/19 | Tuesday | West | Hippocampus |
| 10/3/19 | Thursday | Jones | Intro to Neuroimaging Techniques |
| 10/4/19 | Friday | ---- | EXAM 2 – END OF COURSE |

Additional Course Information

Reading. The textbook will be D.E. Haines’s *Fundamental Neuroscience for Basic and Clinical Applications*. 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 two laboratory sessions, held in the Health Sciences Education Building. 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. Two written examinations (each 50% of the grade) covering material presented in the lectures, labs and readings. The exams are not comprehensive (except that a working knowledge of earlier material is expected). Typically, 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 Website. There is a site for the course on the university’s Canvas 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.

Hyperbrain. The online neuroanatomy tutorial, HyperBrain, was originally developed as a teaching resource for medical students and can be a valuable tool for this course, as well. Throughout the course, students will be pointed toward relevant sections of the HyperBrain syllabus. It is highly recommended that you work through the illustrations provided there. <https://library.med.utah.edu/kw/hyperbrain/>