**Functional Neuroanatomy, Neuroscience 1011/2011**

 **Spring 2017**

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TA’s TBD

**Class:** Class is held three times per week in TBD

Optional recitations TBD

Optional ***exam reviews*** will be held usually two nights before each exam. Please see CourseWeb for the detailed schedule.

**Grading:** Students are responsible for ***all*** material presented in lectures. Most exam questions come from the handouts for each lecture, but additional questions come from the lectures themselves. There are 5 non-cumulative exams, each worth 18.5% of the total grade. Four exams are given during the scheduled class time, and the fifth exam is given during finals week. The remaining 7.5% of the grade will come from participation in the Top Hat classroom response system. (Top Hat use TBD)

**Recommended**

**Textbook**: Brodal, *The Central Nervous System, Structure and Function, 4th ed*

**On Reserve:** Brodal, *The Central Nervous System, Structure and Function, 4th ed*

Kingsley, *Concise Text of Neuroscience*

Heimer, *The Human Brain and Spinal Cord*

Kandel, Schwartz, and Jessell, *Principles of Neural Science, 4th ed*

Netter, *Nervous System, Part I, Anatomy and Physiology*

Sundsten, *Interactive Brain Atlas*, CD-Rom for Windows and Mac

**Internet Neuroanatomy Sites** (*all were working on August 14th 2015)*

Blood Supply

http://www.csus.edu/indiv/m/mckeoughd/AanatomyRev/VascSys/Schematic/CerebAsSchematic.htm

http://www.youtube.com/watch?v=cq8PPqUDTSo (Part 1 of 11 part video; need to watch them all)

Embryology, including neuroembryology

http://embryology.med.unsw.edu.au/

History of Neuroscience - Milestones in Research

http://faculty.washington.edu/chudler/hist.html

MedPix: Medical Image Database, Central and Peripheral Nerves

http://rad.usuhs.edu/medpix/

Neuroanatomy Collection

http://neuroanatomy.bsd.uchicago.edu/

Neuroanatomy Tutorial

http://library.med.utah.edu/WebPath/HISTHTML/NEURANAT/NEURANCA.html

Neuron Wikipedia

http://en.wikipedia.org/wiki/Neuron

Neurophysiology Virtual Lab

http://www.hhmi.org/biointeractive/neurophysiology‑virtual‑lab

Neuroscience for Kids

http://faculty.washington.edu/chudler/neurok.html

Primary Visual Cortex

http://webvision.med.utah.edu/VisualCortex.html

Retinal Information Processing - Receptive Fields

http://www.sumanasinc.com/webcontent/animations/content/receptivefields.html

Synapse Web (electron microscopic and 3D rendering of cellular elements in the nervous system)

http://synapses.clm.utexas.edu/

**Lectures:**

Each block has 5 or 6 lectures, with some of the titles below counting as multiple lectures. Please note that new lectures started in the class just before an exam are usually not on that exam.

Dates with no lectures:

TBD

Other important dates:

TBD Spring term add/drop period ends

TBD Spring term deadline for monitored withdrawal

TBD Final Exam

***Block 1***

*Neurocytology and Simple Circuits*

*Methods for Studying the Nervous System*

*Neuroembryology*

*Gross Structure: Spinal Cord*

*Gross Structure: Brainstem*

*Gross Structure: Higher Centers*

***Block 2***

*Gross Structure: Support and Circulation*

*Introduction to Sensory Systems, Somatosensory Receptors and Receptive Fields*

*Ascending Somatosensory Pathways: Dorsal Column and Spinothalamic Tract (2)*

*Vestibular and Auditory*

***Block 3***

*Visual System (2)*

*Olfactory System*

*Introduction to Motor Systems*

*Spinal Reflexes and Descending Brainstem Pathways (2)*

***Block 4***

*Eye Movements*

*Descending Pathways for Voluntary Movement*

*Basal Ganglia*

*Cerebellum*

*Autonomic Nervous System*

***Block 5***

*Hypothalamus*

*Reticular Formation and Regulation of Conscious States*

*Limbic Circuitry*

*Hippocampus*

*Cerebral Cortex*

*Regeneration in the Nervous System*