BIOLOGY 3411, FALL 2015
Principles of the Nervous System

Class Schedule
Monday, Wednesday, Friday - Rebstock 215
Class begins on Wednesday August 26
10:00 am – 11:00 am

Instructors:
Dr. Larry Salkoff (coursemaster) 362-3644  salkoffl@pcg.wustl.edu
Dr. Thomas Woolsey 495-5971(c)  woolseyt@wusm.wustl.edu

TAs:
Alexander Cammack  ajcammack@wustl.edu
Katherine Heisey  klheisey@wustl.edu
Lenny Ramsey  ramseylenny@wustl.edu
Hailun (Helen) Li  hailunli@wustl.edu
Yansel Nunez  nunez@go.wustl.edu
Lisa Soumekh  lsoumekh@wustl.edu
Mira Tanenbaum  mira.tanenbaum@wustl.edu
Claire Weichselbaum  cweichselbaum@wustl.edu
Jensen (Kael) White  jkwhite@wustl.edu

(Copies of both books are on reserve in Olin Library.)
- Website: https://bb.wustl.edu

A. Introduction to & Overview of the Nervous System
Aug. 26 (Wed.) Lecture I: Introduction to the Course (L. Salkoff).
Aug. 28 (Fri.) Lecture II: The Nervous System and Its Cells (T. Woolsey).

B. Development (T. Woolsey)
Aug. 31 (Mon.) Lecture III: Nervous System Embryology
Sept. 2 (Wed.) Lecture IV: Neural Development - Mechanisms
Sept. 4 (Fri.) Discussion 1
Sept. 7 (Mon.) Labor Day, No Class
Sept. 9 (Wed.) Lecture V: Making Connections – CNS Patterning
Sept. 11 (Fri.) Discussion 2
C. Electrical Properties of the Brain (L. Salkoff)

Sept. 14 (Mon.) Lecture VI: Membranes and Bioelectricity
Sept. 16 (Wed.) Lecture VII: The Resting Potential
Sept. 18 (Fri.) Discussion 3
Sept. 21 (Mon.) Lecture VIII: Voltage-Gated Ion Channels
Sept. 24 (Wed.) Lecture IX: Ion Channels and Action Potentials
Sept. 25 (Fri.) Discussion 4
Sept. 28 (Mon.) Lecture X: Diversity of Ion Channels

D. The Synapse and Complex Electrical Behavior (L. Salkoff)

Sept. 30 (Wed.) Lecture XI: Chemical Transmission: Ligand-gated Ion Channels
Oct. 2 (Fri.) Discussion 9
Oct. 5 (Mon.) Lecture XII: Synaptic Integration / Synaptic Plasticity - LTP
Oct. 7 (Wed.) Lecture XIII: Heterogeneity of Neurotransmitters and Receptors
Oct. 9 (Fri.) Discussion 6
Oct. 12 (Mon.) Lecture XIV: Neurotoxins and Psychotropic Drugs
Oct. 14 (Wed.) Lecture XV: Ion Channels and Disease

Oct. 16 (Fri.) Fall Break-No Class

Oct. 21 (Wed.) Review Session

Oct. 23 (Fri.) Midterm Exam

E. Brain Pathways and Functions (T. Woolsey)

Oct. 26 (Mon.) Lecture XVII: Spinal Cord, Reflexes and Pathways
Oct. 28 (Wed.) Lecture XVIII: Brainstem and Thalamus
Oct. 30 (Fri.) Discussion 7
Nov. 2 (Mon.) Lecture XIX. Cerebellum and Basal Ganglia
Nov. 4 (Wed.) Lecture XX: Sensation
Nov. 6 (Fri.) Discussion 8
Nov. 9 (Mon.) Lecture XXI: Movement
Nov. 11 (Wed.) Lecture XXII: Integrating Functions
Nov. 13 (Fri.) Discussion 9
Nov. 16 (Mon.) Lecture XXIII: Experience and Critical Periods. (aka, Plastics)

**F. Lessons from Brain Disorders (T. Woolsey)**

Nov. 18 (Wed.) Lecture XXIV: Brain Diseases I
Nov. 20 (Fri.) Discussion 10
Nov. 23 (Mon.) Lecture XXV: Brain Diseases II

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**Nov. 25 – Nov. 29  Thanksgiving break - No Class**

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**G. Overviews (T. Woolsey & L. Salkoff)**

Nov. 30 (Mon.) Lecture XXVI: Genetics and Human Brains: Clues from Abnormalities
Dec. 2 (Wed.) Lecture XXVII: The Neurobiology of Consciousness
Dec. 4 (Fri.) Discussion 11 – Review with TA’s

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**G. Final Review - Dec. 7 (Mon.)**

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**H. Final Exam - Dec. 14 (Monday) 215 & 322 Rebstock (10:30 am – 12:30 pm)**