

University of Montana

ScholarWorks at University of Montana

Syllabi

Course Syllabi

Fall 9-1-2007

BMED 347.01: Introduction to Neuroscience

Michael Kavanaugh

University of Montana - Missoula, michael.kavanaugh@umontana.edu

Follow this and additional works at: <https://scholarworks.umt.edu/syllabi>

Let us know how access to this document benefits you.

Recommended Citation

Kavanaugh, Michael, "BMED 347.01: Introduction to Neuroscience" (2007). *Syllabi*. 10936.
<https://scholarworks.umt.edu/syllabi/10936>

This Syllabus is brought to you for free and open access by the Course Syllabi at ScholarWorks at University of Montana. It has been accepted for inclusion in Syllabi by an authorized administrator of ScholarWorks at University of Montana. For more information, please contact scholarworks@mso.umt.edu.

Introduction to Neuroscience BMED/BIOL 347

Course Instructor: Michael Kavanaugh, Ph.D.

Office: SB 390 Phone: 243-4398 michael.kavanaugh@umontana.edu

Office hours: Tu,W,Th 3-4

Course Description:

This course will focus on the molecular and cellular physiology of the human nervous system. The topics will range from the basis of electrical and chemical signaling in neurons to the organization of the nervous system and its functions in generating behavior.

PREREQUISITES: Introductory Chemistry, Biology

TEXTBOOK: Neuroscience, edited by Bear et al. 3rd edition

Course Format:

3 credits: MWF 2:10-3:00 CP 212

Goals:

The goals of the course are 1) to give students a basic understanding of neuronal signaling by exploring the cellular and molecular properties of neurons and 2) to begin to apply these principles to understand the higher level organization and functions of the brain, such as sensory perception, behavior, and learning and memory.

Course Content and Tentative Schedule:

<u>DATES</u>	<u>TOPIC</u>	<u>CHAPTER</u>	
WEEK 1: Basic Overview, Cell Biology and Electrical Properties of Neurons (Ch. 1-3) Aug 27,29,31			
WEEK 2: The Action Potential, Synaptic Transmission (Ch. 4,5) Sep 5,7			
WEEK 3: Neurotransmitters, Structure of the Nervous System (Ch. 6,7) Sep 10,12,14			
WEEK 4: Structure of the Nervous System, Sensory Mechanisms: Taste, Smell (Ch. 7,8) Sep 17,19,21			
WEEK 5: Vision and Central Visual Pathways (Ch. 9,10) Sep 24,26,28 (Sep 28 exam 1 ch 1-8)			
WEEK 6: Auditory and Vestibular Systems (Ch. 11) Oct 1,3,5			

WEEK 7: Somatic Sensory Systems, Spinal Motor Control (Ch. 12,13)
Oct 8,10,12

WEEK 8: Spinal and Central Motor Control (Ch. 13,14)
Oct 15,17,19

WEEK 9: Central motor control, Brain Chemistry and Behavior (Ch. 14,15)
Oct 22,24,26 (Oct 26 exam 2 ch. 9-14)

WEEK 10: Brain Chemistry and Behavior (Ch.15)
Oct 29,31, Nov 2

WEEK 11: Motivation and Sex (Ch. 16,17)
Nov 5,7,9

WEEK 12: Emotion and Language (Ch. 18,20)
Nov 14,16

WEEK 13: exam 3 (Ch 15-20)
Nov 19 (Nov 21,23-Thanksgiving)

WEEK 14: Attention, Mental Illness (Ch 21,22)
Nov 26,28,30

WEEK 15: Memory, Synaptic Plasticity (Ch. 24,25)
Dec 3,5,7

FINAL Dec 12 1:10-3:10 (tent.)