

**NEUROBIOLOGY: BIOL 31500**  
**Spring 2008**

<b>Date</b>	<b>Lecture Topic</b>	<b>Readings</b>	<b>Discussion</b>
W 1/23	History of Neuroscience, Neurons and Glia	Chapter 1	<i>Secret Life of the Brain</i>
F 1/25	Gross anatomy of the brain and spinal cord	Appendix pg 815-820	
M 1/28	Ventricular system, meninges and blood-brain barrier	Appendix pg 837-842	
W 1/30	Resting membrane potential	Chapter 2	<i>Secret Life of the Brain</i>
F 2/1	Action potential, voltage-clamping	Chapter 3	
M 2/4	Voltage gated ion channels		
W 2/6	Action potential propagation		<i>Phantoms of the Brain(Ch 2,3)</i>
F 2/8	Whole cell recording and patch clamp recording	Chapter 4 pg 61-74, Assignment due 2/8	
M 2/11	<b>NO CLASS</b>		
W 2/13	<b>EXAM #1</b>		<b>(EXAM)</b>
F 2/15	<b>NO CLASS</b>		
M 2/18	Synaptic transmission	Chapter 5 pg 85-107, 112-117	
W 2/20	Neurotransmitters: ACh, catecholamines	Chapter 6, skim Chapter 7	Epilepsy
F 2/22	Neurotransmitters: serotonin		
M 2/25	Neurotransmitters: amino acids; GABA		
W 2/27	Neurotransmitters: peptides; nitric oxide		Bipolar Disorder
F 2/29	Central Pattern Generators and Neural Networks		
M 3/3	Somatic sensation	Chapter 9	
W 3/5	<b>EXAM #2</b>		<b>(EXAM)</b>
F 3/7	Pain, Audition	Chapter 10, 13	
3/10-3/14	<i>Spring Break – no classes</i>		
M 3/17	Audition (cont), Vestibular	Chapter 14	
W 3/19	Taste and Smell	Chapter 15	Schizophrenia
F 3/21	Motor systems; Gamma motor neurons	Chapter 16	
M 3/24	Reflex pathways		
W 3/26	Motor cortex, basal ganglia	Chapter 17	Sensory systems
F 3/28	Basal ganglia and cerebellum	Chapter 18	
M 3/31	Cerebellum and motor disorders	Chapter 19	
W 4/2	Parkinson's disease		<i>Brain Transplant</i>
F 4/4	Prion diseases		
M 4/7	<b>NO CLASS</b>		
W 4/9	<b>EXAM #3</b>		<b>(EXAM)</b>
F 4/11	Early development of the nervous system	Chapter 22	
M 4/14	Neuronal migration and differentiation	Chapter 23	
W 4/16	Trophic factors and synapse formation		Huntington's disease
F 4/18	Axonal repair and regeneration	Chapter 25	
M 4/21	Learning and memory: Anatomy	Chapter 31	
W 4/23	Learning and memory: Physiology in the <i>Aplysia</i>	Chapter 8	Spinal cord regeneration
F 4/25	Learning and memory: Physiology in the hippocampus		
M 4/28	Long term potentiation and long term depression		
W 4/30	Alzheimer's disease		Dementia
F 5/2	Emotion and the Limbic system	Chapter 29	
M 5/5	Addiction		
R 5/8	<b>FINAL EXAM – take home due at 1:30 pm</b>		