

MCB461 / NEUR461 Lecture and Exam Schedule – FALL 2019

Complete reading assignment & quiz BEFORE CLASS						
<u>Date</u>	<u>Day</u>	<u>Lecture Topic</u>	<u>Required Reading</u> Fundamental Neuroscience 4 th ed	<u>Recommended Reading</u> Neuroscience: Exploring the Brain 4 th ed	<u>Reading Assignments</u> Students with the last name starting	<u>Open-book Quiz due 2 pm on required reading</u> (all students)
Topic 1: Neurons and Glia, Membrane and Action Potential						
Aug 26	Mon	Overview	Chapters 1-2			
Aug 28	Wed	Cellular Organization of Nervous System	Chapters 3	Chapter 2		3 questions on Chapters 3-4
Aug 30	Fri	Subcellular Organization of Nervous System	Chapter 4	Chapter 2		
Sept 2	Mon	Labor Day (No Class)				
Sept 4	Wed	Dementia and Tauopathy	Clavaguera et al., 2013		Last name: A-K	
Sept 6	Fri	Resting Membrane Potential	Chapter 5 p93-102	Chapter 3		3 questions on Chapter 5
Sept 9	Mon	Action Potentials (Ionic Basis)	Chapter 5 p102-116	Chapter 4		
Sept 11	Wed	Guest Lecturer (Dr. Catherine Best, Dept. Bioengineering)				
Sept 13	Fri	Guest Lecturer (Dr. Catherine Best, Dept. Bioengineering)				
Sept 16	Mon	Guest Lecturer (Dr. Graham Huesmann, Neurology, Epilepsy Center, Carle Hospital)				
Sept 18	Wed	Action Potentials (Modulation)	Chapter 5 p102-116	Chapter 4		4 questions on Chapter 5
Sept 20	Fri	Epileptic Encephalopathy	Liu et al., 2013		Last name: L-Z	
Sept 23	Mon	Review of Topic 1				
Sept 25	Wed	Exam I (Topic 1 Only)				

Topic 2: Neurotransmitters and Synaptic Transmission

Sept 27	Fri	Principle of Synaptic Transmission	Chapter 6	Chapter 5		3 questions on Chapters 6-7
Sept 30	Mon	Neurotransmitter (Synthesis & Storage)	Chapter 6	Chapters 5-6		
Oct 2	Wed	Neurotransmitter (Release and Retrieval)	Chapter 7	Chapter 5		
Oct 4	Fri	Botulium toxin (Botox)	Dong et al., 2006		Last name: A-K	
Oct 7	Mon	Neurotransmitter Receptors	Chapter 8	Chapter 6		4 questions on Chapters 8-9
Oct 9	Wed	Intracellular Signaling	Chapter 9	Chapter 6		
Oct 11	Fri	Postsynaptic Potentials & Synaptic Integration	Chapter 10	Chapter 5		3 questions on Chapter 10
Oct 14	Mon	Endocannabinoids & Marijuana	Morgan et al, 2014		Last name: L-Z	
Oct 16	Wed	Review of Topic 2				
Oct 18	Fri	Exam II (Topic 2 Only)				

Topic 3: Nervous System Development – Molecular View

Oct 21	Mon	Neurogenesis and Differentiation	Chapters 14-15	Chapter 23		3 questions on Chapters 14-16
Oct 23	Wed	Multiple Sclerosis	Ren et al., 2011		Last name: A-K	
Oct 25	Fri	Growth Cones and Axon Pathfinding	Chapter 16	Chapter23		
Oct 28	Mon	Spinal Cord Injury and Axon	Cafferty et al., 2010		Last name: L-Z	
Oct 30	Wed	Synapse Formation	Chapter 17	Chapter23		4 questions on Chapters 17-18
Nov 1	Fri	Programmed Cell Death & Neurotrophic Factor	Chapter 18	Chapter23		
Nov 4	Mon	Cerebral Organoids in a dish	Lancaster et al., 2013		Last name: A-K	
Nov 6	Wed	Synapse Elimination	Chapter 19	Chapter23		3 questions on Chapters 19-20
Nov 8	Fri	Dendrite Development	Chapter 20			

Nov 11	Mon	Autism	Tabuchi et al., 2007		Last name: L-Z	
Nov 13	Wed	Review of Topic 3				
Nov 15	Fri	Exam III (Topic 3 Only)				
Topic 4: Neural Plasticity, Behavior, and Cognition						
Nov 18	Mon	Honors Student Presentation				
Nov 20	Wed	Neural Plasticity	Chapter 21	Chapter23		3 questions on Chapters 21, 47
Nov 22	Fri	Learning and Memory (Invertebrate System)	Chapter 47 p1009-1016	Chapters 24-25		
Nov 25	Mon	Thanksgiving break				
Nov 27	Wed	Thanksgiving break				
Nov 29	Fri	Thanksgiving break				
Dec 2	Mon	Learning and Memory (Vertebrate System)	Chapter 47 p1016-1027 Chapter 48	Chapters 23, 25		4 questions on Chapters 47-48
Dec 4	Wed	Alzheimer Disease – Abeta	Shankar et al., 2008		Last name: A-K	
Dec 6	Fri	Reward, Motivation, Addiction	Chapter 41	Chapter 24		3 questions on Chapters 41
Dec 9	Mon	Addiction	Zhu et al., 2016		Last name: L-Z	
Dec 11	Wed	Review of Topic 4 ICES Evaluation in Class				ICES Bonus Points
Dec 12	Thur	Reading day				
TBA	TBA	Final Exam (Comprehensive) time TBA)				