

# INTRO TO NEUR: NEUROSCIENCE 212

## 2016-2017

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### Course Description:

This is an introductory course into the basic principles of neuroanatomy and neurophysiology. It will begin with lessons covering the general organization of the central nervous system. Basic properties of ion channels, mechanisms of action potential generation and propagation, and principles of synaptic transmission will be covered. The latter part of the course will concentrate on specific systems such as the visual, auditory, motor, sensory, and limbic systems. A study of various disorders and diseases of the brain will be included.

### Text:

Bear, Connors, and Paradiso (2007) *Neuroscience: Exploring the Brain (3<sup>rd</sup> Edition)*. Lippincott, Williams, & Wilkins.

### Class Policies:

#### Attendance:

Attendance is important to your success in the class. You are expected to attend all class meetings and missing class will certainly affect your understanding of neuroscience and your grade in the class. If you miss class you are still responsible for the material covered. In addition, it is important to come to class on time. A student arriving late is a distraction and even a disruption to the class. Therefore being late to class will not be tolerated and school policy consequences will be enforced.

#### E-mail:

Emails should be reserved for unusual circumstances and should be rare occurrences. The best way to communicate with me is to meet with me during my office hours if possible. Otherwise, make arrangements to meet with me before or after school. Questions about class assignments, examinations, and anything course related should be addressed during those times.

#### Office Hours:

Students who cannot make the established time set aside for office hours because of class conflicts are strongly encouraged to make an appointment for an

alternative time. Everyone else is expected to use the schedule office hours. Be aware that office hours are not only for those having trouble in the course but that it also a good idea for all students to stop by during my office hours periodically if only to assess your own progress.

**Students with Disabilities:**

If anyone has a disability and needs special accommodations, please contact our special education department. Please make any necessary arrangements before examinations, assignments, or papers, etc. are due because accommodations cannot be made *after the fact*.

**Classroom conduct:**

I expect you to be courteous and to show respect for all members of the class. Please arrive on time and refrain from any behavior that is distracting to others in the class. Leaving to use the rest room or water fountain during a class lecture is rude and disruptive; therefore, use the rest rooms and water fountains either before or after class. Cell phones are not to be turned on or used in class. I pads are to be used only for assigned lessons.

**Missed Course Assignments:**

It is assumed that students have read the syllabus and are aware of all due dates. If you miss a quiz, test, or assignment your grade for that course assignment will be 0. Students will not be allowed to postpone the dates of the quizzes, tests, etc. unless they have an excused absence from the office.

**Statement of Academic Integrity:**

Kenyon College and I expect all students, at all times, to submit work that represents the highest standards of academic integrity. It is the responsibility of each student to learn and practice the proper ways of documenting and acknowledging those whose ideas and words they have drawn upon (see Academic Honesty and Questions of Plagiarism in Kenyon College's Course Catalog). Ignorance and carelessness are not excuses for academic dishonesty. If you are uncertain about the expectations for this class, please ask for clarification.

**STUDENT ASSESSMENTS**

**% of final grade**

1) Quizzes	40
2) Exam 1	15
3) Exam 2	15
4) Final Exam	20
5) Class Participation/Attendance	<u>10</u>
	100

## **ASSESSMENT POLICY**

### **Examinations**

All examinations will consist of both an in-class component and a take home component. The in-class component will consist of a combination of anatomical identifications, fill-in-the-blank, multiple choice, and short answer questions. These questions will focus primarily on the class lectures, classroom discussions, and any films shown in class. The essays will focus on conceptual questions integrating the lectures and assigned readings. Essay questions will be handed out 1 week before the in-class examination and are due on the day of the examination at the beginning of the class. Students are expected to work independently on the take home essays and to turn in unique work. All essays must be type written form in font no smaller than 12 point. Students should strictly adhere to page limits (these will be indicated on individual questions), grammar, spelling, etc., if they wish to get full credit for their efforts. The final examination will also consist of an in class section and a take home section.

### **Quizzes**

There will also be periodic quizzes that will be taken online using the class SCHOOLGY site. These are timed quizzes, taken outside the classroom (usually over the weekend) consisting of multiple choice or short answer questions. Students are expected to work independently on the quizzes. Unless otherwise stated, quizzes will open on Friday evening and will close on Sunday evening. There are no make-up quizzes. *Note: Students who have concerns about the results of an examination or quiz must raise those concerns within a week of receiving the results of that quiz.*

### **Grades**

The vast majority (90%) of your final grade will be based on the tests and quizzes describe above. The remaining 10% of your final grade will be based on participation and attendance, which includes:

- a. Regularly attending class
- b. Asking and answering questions
- c. Participating in class discussions
- d. Regular attendance, and completing any ancillary assignments

Final letter grades will be assigned according to the following scale:

92-100% = A	4.00	90-91% = A-	3.75
88-89% = B+	3.50	82-87% = B	3.00
80-81% = B-	2.75	78-79% = C+	2.50
72-77% = C	2.00	70-71% = C-	1.75
68-69% = D+	1.50	62-67% = D	1.00
60-61% = D-	0.75	59-0% = F	0.00

# Tentative Schedule of Topics

Date	Topic	Reading
Jan. 2	Introduction to the course/Ground Rules Introduction to Neuroscience	Chapter 1
<i><u>Anatomy</u></i>		
Jan. 8	Neurons and Glia	Chapter 2
Jan. 16	Major Brain Structures	Chapter 7
Jan. 22	Major Brain Structures	Chapter 7
<i><u>Quiz 1</u></i>		
<i><u>Neurotransmission</u></i>		
Jan 29	Neural Membranes	Chapter 3
Feb 5	Generation of Action Potentials	Chapter 4
Feb 12	Generation of Action Potentials	Chapter 4
<i><u>Quiz 2</u></i>		
Feb 20	Synaptic Transmission	Chapter 5
Feb 26	Neurotransmitter Systems	Chapter 6
<i><u>Quiz 3</u></i>		
March 5	Neuropsychopharmacology Review	Supplemental reading
<b><u>Examination #1</u></b>		
<i><u>Sensory Systems</u></i>		
March 12	Visual System	Chapter 10
March 19	Auditory and Vestibular Systems	Chapter 10
<i><u>Quiz 4</u></i>		
March 26	<b>Spring Break</b>	

April	3	Somatosensory System	Chapter 12
April	9	Somatosensory & Sensorimotor Systems	Chapter 14
April	16	Sensorimotor Systems	Chapter 14

Quiz 5

April	23	Memory Systems	Chapter 24
April	30	Memory Systems & Review	Chapter 24

**Examination #2**

Mental Illness

May	7	Anxiety and Mood Disorders	Chapter 22
May	14	Mood Disorders and Schizophrenia	Chapter 22

*Note: Supplemental readings will be assigned throughout the course*

Quiz #6

May	21	<b><u>Final Examination</u></b>	
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