

**BIOL 5311/6311**  
**Fall Semester 2017**  
**Neurobiology of Brain Diseases**

**Instructor:** Kyung-An Han, Ph. D.  
Office: 3.152 Biosciences Building  
Hours: by appointment  
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**Class Meetings:** 6:00 PM - 7:20 PM, MW

**Classroom:** TBN

**Course Objectives:** The objective of this course is to provide contemporary knowledge and insights into the molecular, genetic, cellular and neural basis of brain disorders. The course will focus on neurodegenerative and cognitive disorders that are highly prevalent in our society as listed below.

**Topics to be covered**

Overview on the nervous system – neurophysiology  
Overview on the CNS – brain and spinal cord  
Alzheimer’s Disease  
Parkinson’s Disease  
Huntington’s Disease  
Prion Disease/CJD  
Autism Spectrum Disorders  
Depression  
Learning and memory disorders - ADHD, mental retardation and PTSD

**Text:** A general textbook – e.g. *Neuroscience* (Purves et al., 3<sup>rd</sup> or 4<sup>th</sup> Ed, Sinauer Associates, 2004/2011) or *Human Anatomy & Physiology* (Elaine N. Marieb & Katja Hoehn, 8<sup>th</sup> or later Ed, Pearson Benjamin Cummings, 2010) - is recommended for background information on CNS functions and anatomy. Readings on review and primary research papers on selected topics will be provided.

**Examinations and grading:**

1 <sup>st</sup> exam:	25% of the grade
2 <sup>nd</sup> exam:	25%
Paper assignment:	25%
Review assignment:	10%
Paper presentation	10%
Attendance/Participation	5%

Exams will mainly consist of short-answer and essay questions, and will be open book tests. A paper is a compare/contrast critique of three current primary literatures on the topics covered in this course (detailed instructions will be given separately). The papers will be reviewed and graded by your classmates in addition to myself. Paper presentation is a group effort with each group consisting of 2 students. Topics and format will be discussed in the class. Final grades will be assigned as follows: A=90-100, B=80-89, C=70-79, D=60-69, F=0-59

If you have a disability and need classroom accommodations, please contact The Center for Accommodations and Support Services (CASS) at 747-5148 or by email to [cass@utep.edu](mailto:cass@utep.edu), or visit their office located in Union East, Room 106. For additional information, please visit the CASS website at [www.sa.utep.edu/cass](http://www.sa.utep.edu/cass).

## **Course Schedule**

<b>Lectures</b>	<b>Topic</b>
1-3	Introduction The Nervous System – overview, neurophysiology
4-5	The Central Nervous System - overview
6-9	NG Introduction, Alzheimer's Disease and FTD (review articles posted in blackboard)
10-13	Parkinson's (PD) and Huntington's Diseases (HD) (review articles posted in blackboard)
14	HD Group 1 Presentation, Group 2 Presentation
15	Group 3 Presentation review for the first exam
16	First Exam (Lectures 1 – 14)
17	Prion Disease (review articles posted in blackboard)
18-20	Neurodevelopment & Autism Spectrum Disorders (review articles posted)
21-23	Depression (review articles posted)
24-26	Learning & Memory (ADHD, RTS, PTSD) (review articles posted)
27, 28	Presentations: Group 4 Presentation Group 5 Presentation Review for the second exam
29	Second Exam (Lectures 17-26)

**The schedule is subject to change. Please check Blackboard regularly for changes or important announcements.**