

**BIOL 6311/5311**  
**Fall Semester 2019**  
**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:** Health Science/School of NURS Bldg 212

**Course Objectives:** The objective of this course is to provide contemporary knowledge and insights into the genetic, molecular, cellular and neural basis of brain diseases. The course will focus on the brain disorders that are 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  
Overview on brain development  
Autism Spectrum Disorders  
Depression  
Learning and memory disorders - ADHD, mental retardation (RTS) and PTSD

**Text:** A general textbook – e.g *Neuroscience* (Purves et al., 6<sup>th</sup> Ed, Sinauer Associates, 2017; or earlier Ed) or *Human Anatomy & Physiology* (Elaine N. Marieb & Katja Hoehn, 11<sup>th</sup> Ed, Pearson Benjamin Cummings, 2018; or earlier Ed) - 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% (due on October 28)
Review assignment:	10% (due on November 18)
Paper presentation	10%
Attendance/Participation	5%

Exams consist of short-answer and essay questions and will be take-home (1<sup>st</sup> exam) and open-book (2<sup>nd</sup> exam) 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 (ref: any <i>Human Anatomy &amp; Physiology</i> textbook)
4-5	The Central Nervous System (ref: any <i>Human Anatomy &amp; Physiology</i> textbook)
6-10	NG Introduction, Alzheimer's Disease and FTD (review articles posted in blackboard)
11-15	Parkinson's and Huntington's Diseases (review articles)
16-17	Prion diseases (review articles) Paper presentations
18-21	Neurodevelopment & Autism Spectrum Disorders (review articles) Paper presentations
22-25	Depression (review articles) Paper presentations
26-28	Learning & Memory (LM: ADHD, RTS, PTSD) (review articles posted) Paper presentations
Dec 9 7-9 pm	Second Exam: Open book test

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