

**BIOL 6311**  
**Fall Semester 2020**  
**Neurobiology of Brain Diseases**

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

**Classroom:** Online until further notice

**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  
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 <b>November 9 M</b> )
Review assignment:	5% (due on <b>November 23 M</b> )
Paper presentation	10%
Homework	5%

Exams consist of short-answer and essay questions and will be open-book tests. A paper is a compare/contrast critique of two (BIOL5311) or three (BIOL6311) 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 on a research article published within a year and a 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).

**Academic Dishonesty and Expected Behavior:** Students at UTEP are expected to behave in a manner that supports the integrity of the academic system. **Cheating, plagiarism and collusion are unethical and prohibited, and will result in disciplinary action.** Violations will be reported to the Dean of Students. A zero tolerance policy for plagiarism will be applied. For more information, please check the web site: [www.plagiarism.org](http://www.plagiarism.org)

**PLAGIARISM/ACADEMIC DISHONESTY STATEMENT:** Plagiarism is using information or original wording in a paper without giving credit to the source of that information or wording: it is also not acceptable. Do not submit work under your name that you did not do yourself. You may not submit work for this class that you did for another class. **If you are found to be cheating or plagiarizing, you will be subject to disciplinary action, per UTEP catalog policy.** Refer to <http://www.utep.edu/dos/acadintg.htm> for further information.

### Course Schedule

Lectures	Topic
1-3	Introduction The Nervous System – overview, neurophysiology (ref: any <i>Neuroscience</i> or <i>ANP</i> textbook)
4-5	The Central Nervous System (ref: any <i>Neuroscience</i> or <i>ANP</i> textbook)
6-9	NG Introduction, Alzheimer’s Disease and FTD (review articles posted in blackboard)
10-13	Parkinson’s and Huntington’s Diseases (review articles)
14 Oct 21 W	<b>First Exam</b> <b>Open book test</b>
15-17	Prion diseases (review articles) Paper presentations
18-21	Neurodevelopment & Autism Spectrum Disorders (review articles) Paper presentations
22-25	Depression (review articles) Paper presentations
26-27	Learning & Memory (LM: ADHD, RTS, PTSD) (review articles posted) Paper presentations
Dec 7 M 6-8 pm	<b>Second Exam:</b> <b>Open book test</b>

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