**Instructor:** Kyung-An Han, Ph. D.
Office: 3.152 Biosciences Building
Hours: by appointment
Email: khan@utep.edu

**Class Meetings:** 6:00 PM - 7:20 PM, MW

**Classroom:** Physical Science Bldg 314

**Course Objectives:** The objective of this course is to provide contemporary knowledge and insights into the molecular, genetic, cellular and neural basis of brain diseases. The course will focus on neurodegenerative and cognitive 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., 3rd or 4th Ed, Sinauer Associates, 2004/2011) or *Human Anatomy & Physiology* (Elaine N. Marieb & Katja Hoehn, 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:**
- 1st exam: 25% of the grade
- 2nd exam: 25%
- Paper assignment: 25% (due on October 29)
- Review assignment: 10% (due on November 12)
- Paper presentation: 10%
- Attendance/Participation: 5%

Exams consist of short-answer and essay questions and will be take-home (1st exam) and open-book (2nd 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, or visit their office located in Union East, Room 106. For additional information, please visit the CASS website at www.sa.utep.edu/cass.
## Course Schedule

<table>
<thead>
<tr>
<th>Lectures</th>
<th>Topic</th>
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| 1-3      | Introduction  
The Nervous System – overview, neurophysiology  
(ref: any *Human Anatomy & Physiology* textbook) |
| 4-5      | The Central Nervous System  
(ref: any *Human Anatomy & Physiology* 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)  
Hand out take-home exam on Oct 22 |
| 16       | No class on Oct 24, work on the take-home First Exam  
Lectures 1 – 15 (up to HD)  
due 7:20 pm, Oct 24 |
| 17-18    | Prion diseases (review articles)  
Paper presentations |
| 19-21    | 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 |
| 29       | **Second Exam:**  
Lectures from prions up to L/M  
Open book test |

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