

# **CSD 382 Introduction to Human Neurology**

**Fall 2023 3 credits**

**Room: CPS 233, Occasionally in CPS024**

**Tuesdays and Thursdays 12:30pm to 1:45pm**

**Sept 5 (week 1) - Dec 14 (week 15) Final TBD**

**Instructor: James Barge M.S. CCC-SLP**

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**Office hours: Dependent upon TX schedule. Will be announced in week 2.**

**Graduate Assistant: Jenna Cooper. B.S.**

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**Office hours: Dependent upon TX schedule. Will be announced in week 2.**

## **Course Description:**

This course will introduce the structure and function of the human brain and nervous system (including general organization, cranial nerves, neurons, neurotransmitters, ascending and descending sensory/motor pathways) as related to the fields of speech-language pathology and audiology.

## **After completing this course, students should be able to:**

Discuss the gross anatomy of the central and peripheral nervous systems.

Describe the neuromuscular control for normal speech and gestural production.

Discuss the central nervous system as it relates to normal language production and comprehension.

Describe the central and peripheral nervous systems as they relate to hearing, balance, and vision.

### **Course Objectives:**

The student will be able to demonstrate:

Knowledge of the various portions of the central and peripheral nervous systems.

Knowledge of the sensory systems

Knowledge of the cranial nerves, especially those involved in the process of speech and hearing.

### **Course Overview:**

Introduction to structure and function of the human brain and nervous system.

Basic understanding of neuroanatomy and neurophysiology underlying normal speech, swallowing, language, and hearing. Study of central and peripheral nervous systems.

### **Learning Outcomes:**

At the conclusion of this course, you will be able to

1. Demonstrate knowledge of basic neuroanatomy and neurophysiology mechanisms instrumental to normal speech, language, cognition, and hearing.
2. Explain blood supply to the CNS and describe protective mechanisms to the brain.
3. Demonstrate understanding of basic brain/behavior correlates; describe functional organization of brain activity during activities such as repeating words, reading words, gesturing, listening and following simple auditory commands, writing a sentence, etc.
4. Identify the neurological basis for common pathologies in neurogenic communication disorders across the lifespan.
5. Analyze communication and hearing presentations associated with acquired neurological damage.

### **Required Textbook**

Seikel, J. A., Konstantopoulous, K., & Drumright, D.G. (2020). Neuroanatomy & neurophysiology for speech and hearing sciences. San Diego, CA: Plural Publishing

**Grades:**

I will determine grades by converting accumulated points into percentage scores. I will assign percentage scores to letter grades as follows: A grade of B or higher is considered passing in graduate school.

A	95 – 100	A-	90 - 94.99
B+	87 - 89.99	B	83 - 86.99
B-	80 - 82.99	C+	77-79.99
C	73 - 76.99	C-	70 - 72.99

**Course Outline:**

Module	Topic	Week
i.	Introduction and Overview	1
ii.	Neurons and Glial Cells	2
iii.	Basic Reflexes and Sensory Function	3
iv.	Cerebral Cortex	4,5
v.	Anatomy of the Subcortex	6,7
vi.	Anatomy of the Brainstem	8,9
vii.	The Cranial Nerves	10,11
viii.	Cerebellar Anatomy and Physiology	12
ix	Spinal Cord and Pathways	13
x.	Cerebrovascular Supply	14
xi.	Neural Control of Speech and Swallowing	15

## Course Requirements:

### Examinations:

Exam 1	9-22	10%	Chapters 1-3
Exam 2	10-25	15%	Chapters 4-5
Exam 3	11-22	15%	Chapters 6-7
Exam 4 Final	(12-18 2:45-4:45)		
		15%	Chapters 8-11

### Projects:

			<b>Due</b>
<b>Project 1</b>	5%	Brain Depiction	10-5
<b>Project 2</b>	10%	Functional Model of a Brain Structure	10-24
<b>Project 3</b>	25%	NeuroArts Blueprint Project	
check in 1	5%		
		Select Skill from NeuroArts blueprint	9-14
check in 2	5%		
		Explain Neurological basis of the skill	10-3
check in 3	5%		
		How is the process going? What's difficult?	10-31
check in 4	5%		
		Identify and explain a cause of potential impairment	11-14
check in 5	5%		
		Wrap up. Show and tell. How is your brain better?	12-7
<b>Project 4</b>	5%	NeuroHumanities Project	12-14

### Attendance:

Attendance is strongly encouraged. If an absence is known in advance, please inform the instructor.

**Recommended resources:**

Additional resource recommendations will be shared throughout the semester.

**Accommodations:**

I expect students to inform me about any disability that may impact his or her performance in this class. I will make any necessary accommodation for each student according to her or his needs.

I will accommodate religious beliefs according to UWS 22.03 if you notify me within the first 2 days of the semester regarding specific dates which you will need to change course requirements.

**Additional Information:**

*In the event of a medical emergency, call 911 or use red emergency phone located in the middle hallway in the department. Offer assistance if trained and willing to do so. Guide emergency responders to victim.*

*In the event of a tornado warning, proceed to the lowest level interior room without window exposure which is the middle hallway in the department.*

*See [www.uwsp.edu/rmgt/Pages/em/procedures/other/floor-plans](http://www.uwsp.edu/rmgt/Pages/em/procedures/other/floor-plans) (Links to an external site.) for floor plans showing severe weather shelters on campus. Avoid wide-span rooms and buildings.*

*In the event of a fire alarm, evacuate the building in a calm manner. Meet at the College of Professional Studies Sign on the Fourth Avenue. Notify instructor or emergency command personnel of any missing individuals.*

*Active Shooter – Run/Escape, Hide, Fight. If trapped hide, lock doors, turn off lights, spread out and remain quiet. Follow instructions of emergency responders.*

*See UW-Stevens Point Emergency Management Plan at [www.uwsp.edu/rmgt](http://www.uwsp.edu/rmgt) (Links to an external site.) for details on all emergency response at UW-Stevens Point.*