Spring 2-1-2022

NEUR 491.01: Neuroanatomy

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NEUR 491

Spring

Neuroanatomy

Course Information

Lecture Time: 2:00-2:20 MWF
Course: 3 Credits
Room: Forestry 301
Prerequisites: NEUR 280 or PSYC 100 and BIOH 169

Instructor:
Dr. Katie Holick
e-mail: katie.holick@umt.edu
Office: 385C Skaggs Building
Office Hours: By appt, live or virtual

Textbook:
Required

Neuroanatomy through Clinical Cases 3e by Hal Blumenfeld
ISBN-13: 978-1605359625
ISBN-10: 1605359629

Course Description: Have you ever wondered what structures of the brain carry out such a vast set of complex functions? This neuroanatomy course will outline the fundamental relationship between the structure and function of the central and peripheral nervous systems using both preserved specimens and advanced technology such as virtual reality (VR). Neuroscience, Pre-Med, Psychology, and Human Biology majors will find this course directly related to their future professions.

Learning Outcomes: Through lectures and discussion, the course is designed to ensure that you will learn general principles applicable to many questions that will arise about the human brain and neuroanatomy. Following this course students will:

1. Understand the basic structures of the central and peripheral nervous systems.
2. Comprehend basic functions of neuroanatomical structures.
3. Apply knowledge of the structure/function relationship to pathological conditions.

Classroom Expectations:

1. Bring your interest and curiosity.
2. We will ask you to participate. There are no wrong answers, just opportunities to fine-tune our understanding.
3. Feel free to ask questions at any time.
4. Be respectful of others' thoughts, feelings, and beliefs even if they differ from your own.

Course Policies:

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1. Masks will be required for in-person instruction. If you have a medical condition that does not allow you to wear a mask, please contact the instructor for an alternative seating arrangement.
2. If you must miss an assignment or exam please contact the instructor administering the assignment as soon as you are aware of a conflict or have begun to feel ill.

Course Assignments

1. Exams - Three semester exams and one final exam will be given Test formats will include multiple-choice and short answer questions plus occasional short essays that will be presented in case study form.
    a. If you miss a semester exam, this will be graded as a zero. The final examination is cumulative and must be completed to receive a final grade. Failure to take the final exam will result in a failing grade. *All students are expected to take all exams when they are scheduled*. Students are expected to notify the instructor prior to missing an exam. Students are responsible for any changes in dates of scheduled exams, quizzes, or assignments or any other administrative announcement made during lectures.
2. Quizzes - Each week an online quiz will be given for the Chapters covered within that week via the Moodle website. The purpose of these quizzes is to assess your understanding of the material presented that week in class. These quizzes will be due by midnight Friday of each week.
3. **Case Presentations** - Each Friday (after the first two weeks) we will have case presentations on Fridays. You must complete 8 over the course of the semester and the structure of the case presentations will be posted on Moodle.
4. Final Project – Science Communication
    a. But together an infographic poster on a disease state with a focus on the neuroanatomical structure or structures involved. This could be a poster that would hang in a Dr's Office and provide information on this particular topic but still must contain 3 citations from peer-reviewed literature. (100 pts)
    b. In addition, you will turn your infographic into an Instagram post as well (25 pts)
    c. During the last week of class, we will have a "poster" session where you will present your poster (25 pts).

Your performance will be evaluated as follows:	%	#	Points/Item	Total Points Awarded
Quizzes	11.4%	12	10	120
Semester Exams	47.6%	1	100	100

		2	200	400
Final Assignment	14.2%	1	150	150
Case Presentation	7.6%	8	10	80
Final Exam	19.0%	1	200	200
Total	100%			1050

Safety messaging for Covid-19 situation:

- Mask use is required within the classroom, https://www.umt.edu/coronavirus/mask-policy.php
- Each student is provided with a cleaning kit. The expectation is that students will clean their personal work space when they arrive for class, and before they leave the classroom
- Classrooms may have one-way entrances / exits to minimize crowding
- Students should be discouraged from congregating outside the classroom before and after class
- Specific seating arrangements will be used to ensure social distancing and support contact tracing efforts
- Class attendance will be recorded to support contact tracing efforts, seating chart will be implemented. Fully vaccinated and masked students are not required to quarantine upon exposure to someone in the class testing positive for Covid.
- Drinking liquids and eating food is discouraged within the classroom (which requires mask removal)
- Information on the nearest "refill" stations for cleaning supplies/hand sanitizer if applicable
- If the class is being recorded, students must be notified of the recording. Students should ask permission of instructor if they plan on recording lectures.

Accessibility Syllabus Statement:

The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and the Office for Disability Equity (ODE). If you anticipate or experience barriers based on disability, please contact the ODE at: (406) 243-2243, ode@umontana.edu, or visit www.umt.edu/disability for more information. Retroactive accommodation requests will not be honored, so please, do not delay. As your instructor, I will work with you and the ODE to implement an effective accommodation, and you are welcome to contact me privately if you wish.

Course Schedule

(Dates and topics below are subject to change)

Week	Date	Topic	Chapter(s)
1	1/17	Martin Luther King Day	

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	1/19	Introduction to Course	Syllabus/Chapter1
	1/21	Basic Neuroanatomy Review	Chapter 2
2	1/24	Neurologic Exam	Chapter 3
	1/26	Introduction to Clinical Neuroradiology	Chapter 4
	1/28	**Exam 1**	
3	1/31	Cranium, Ventricles, and Meninges – Basic Info	Chapter 5
	2/2	Cranium, Ventricles, and Meninges – Key Concepts	Chapter 5
	2/4	Cranium, Ventricles, and Meninges – Case Studies	Chapter 5
4	2/7	Corticospinal Tract and Other Motor Pathways Basic Info	Chapter 6
	2/9	Corticospinal Tract and Other Motor Pathways Key Concepts	Chapter 6
	2/11	Corticospinal Tract and Other Motor Pathways Case Studies	Chapter 6
5	2/14	Somatosensory Pathways - Basic Info	Chapter 7
	2/16	Somatosensory Pathways - Key Concepts	Chapter 7
	2/18	Somatosensory Pathways - Case Studies	Chapter 7
6	2/21	Cerebral Hemispheres and Vascular Supply – Basic Info	Chapter 10

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	2/23	Cerebral Hemispheres and Vascular Supply – Key Concepts	Chapter 10
	2/25	Cerebral Hemispheres and Vascular Supply – Case Studies	Chapter 10
7	3/7	Major Plexuses and Peripheral Nerves – Basic Info	Chapter 11
	3/9	Major Plexuses and Peripheral Nerves – Key Concepts	Chapter 11
	3/11	Major Plexuses and Peripheral Nerves – Case Studies **Exam 2 Handed Out**	Chapter 11
8	3/14	Cerebral Hemispheres and Vascular Supply – Basic Info	Chapter 12
	3/16	Cerebral Hemispheres and Vascular Supply – Key Concepts	Chapter 12
	3/18	Cerebral Hemispheres and Vascular Supply – Case Studies **Exam 2 Due**	Chapter 12
9	3/21	No Class – President's Day	
	3/23	And	
	3/25	Spring Break	
10	3/28	Brainstem II: Eye Movements and Pupillary Control: Basic Info	Chapter 13
	3/30	Brainstem II: Eye Movements and Pupillary Control: Basic Info: Key Concepts	Chapter 13
	4/1	Brainstem II: Eye Movements and Pupillary Control: Basic Info: Case Studies	Chapter 13
11	4/4	Brainstem III: Internal Structures and Vascular Supply: Basic Info	Chapter 14

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	4/6	Brainstem III: Internal Structures and Vascular Supply: Key Concepts	Chapter 14
	4/8	Brainstem III: Internal Structures and Vascular Supply: Case Studies	Chapter 14
12	4/11	Cerebellum: Basic Info	Chapter 15
	4/13	Cerebellum: Key Concepts	Chapter 15
	4/15	Cerebellum: Case Studies	Chapter 15
13	4/18	Basal Ganglia: Basic Info	Chapter 16
	4/20	Basal Ganglia: Key Concepts	Chapter 16
	4/22	Basal Ganglia: Case Studies **Exam 3 handed out**	Chapter 16
14	4/25	Limbic System: Basic Info	Chapter 18
	4/27	Limbic System: Key Concepts	Chapter 18
	4/29	Limbic System: Case Studies **Exam 3 Due**	Chapter 18
15	5/2	Poster Session	
	5/4	Review	
	5/6	Review	
Finals Week	5/9		
	5/11		

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	5/13		