

Biology of the Brain (BIOL 859) - Fall 2022

Instructor Information

Instructor: Dr. Surabhi Chandra

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Email: chandras2@unk.edu (preferred contact); emails responded within 24 hours

Textbook and Computer Requirements

Required Text: Neuroscience: Exploring the Brain (4th edition); ISBN 9781451107272

Computer: You will need to have an up-to-date browser, operating system and some additional software on your computer in order to take this class. Some of the documents in this course will be available in PDF form. If you do not have Adobe Acrobat Reader software on your computer, you can download it from <https://get.adobe.com/reader/>

Other material: Webcam (for taking online quizzes and tests)

Course Description and Objectives

Course Description:

This course will focus on the central nervous system (brain and spinal cord) and will include gross anatomical features and landmarks of the cerebral hemispheres, diencephalons, brainstem, cerebellum and spinal cord. Selected abnormal functions will also be studied. The interdependency of the central nervous system to itself (various pathways between the spinal cord and within the brain) as well as to the peripheral nervous system and select organ systems will complete the focus of the course. It is recommended that students have taken anatomy and physiology before enrolling in this course.

Course objectives:

- Understand the relationship between anatomical features of the central nervous system (brain and spinal cord) and their function
- Learn about neural connections and development of human behavior
- Gain knowledge on the effects of aging on the nervous system, and the development of brain/neural diseases
- Be able to justify and provide prevention methods to maintain active functioning of the brain

Course Format, Access, and Attendance

Course Format:

Because this is a web-based course and conducted entirely online, it is extremely important that you **regularly check your UNK email and Canvas**. In this course students will demonstrate their level of achievement by completing tests, participating in discussion boards, and submitting assignments, which will be completed online.

Course Access: After accessing the course on Canvas, use the links on the left of the screen for syllabus, modules, lectures, discussions, quizzes, assignments, or additional resources.

Attendance:

Since this is an online course, “attendance” refers to checking announcements, reading the content, doing the activities, and submitting the assignments by the deadline. It is required that you should be logging in the course at least 3-4 times a week. The instructor can check if you have been accessing the course regularly or not. You are advised to allot specific times on several days of the week (MWF or TTh) towards this course similar to your regular in-class sessions. Print a copy of the schedule on the last page and paste it at a prominent place to keep track of deadlines.

Course Design

The course is outlined in the form of modules as mentioned below. Each module will entail reading the textbook chapters, watching the lecture videos, reading additional resources, and participating in a quiz. In addition to the quizzes, there will be mid-term and final exams. The details on these will be provided as per their schedule.

Modules: There will be 5 modules in this course (schedule on the last page) which are categorized based on the content covered.

Lecture Videos: The lecture videos will be posted on Monday of each week. The content covered in these will be primarily from the textbook.

Quiz: Topics covered in the quiz will be announced on Canvas (Schedule on the last page). Content would include chapters covered in the week and additional reading materials as provided. Quizzes will open on Friday @ 8 am and due by Tuesday

@ midnight. These will typically include 5 multiple choice questions and 2 short answers. *Two of the lowest scores* from these quizzes will be dropped at the end of the semester.

Mid-Term and Final Exam: These exams will be take-home exams, and will include content from textbook chapters as well as some extra referencing based on content covered. Final exam will be comprehensive.

Course Communication

Announcements: Announcements will be posted on Canvas. Please make sure to check them regularly, as they will contain important information regarding assignments, or class concerns.

Discussion Board:

Discussion Board will be used as a means of online communication between students and the instructor.

Original Post- Each module in this course would have a discussion board. You will be assigned to specific groups to participate in the discussion boards. Please read the material assigned, and respond to the question posted. The length of the post must be minimum of 150-200 words with critical and thoughtful explanation of the topics. Support your post with relevant peer-reviewed articles. Original post is due by Friday @ midnight.

Reply to Postings- There will be a minimum of 2 responses that you are required to provide on other students' postings. These responses should not be limited to one word such as "bravo", "nice" or use internet lingo (LOL, ROFL etc.). Typical responses should be at least 2-3 sentences after carefully analyzing the post and providing your inputs. Responses are due by Sunday @midnight.

Grading - Each original post will be worth 7 points and responses will be 3 points (1.5 points each). Points will be deducted if original posts and responses are submitted within an hour of each other. Discussion boards are meant for interaction with your peers, hence continued participation is encouraged.

Coffee House: Since this is an online course, it is normal to have questions regarding assignments, tests, and lecture material. You can post these questions in the COFFEE HOUSE forum under Discussion Board. This will be an open forum where you can help each other.

******Format for Quizzes and Tests**

Quizzes and tests will be given through Canvas. To take quizzes or tests through Canvas, you are required to have the **Respondus lockdown browser** downloaded and you **will need a web camera** for your computer: <https://download.respondus.com/lockdown/download.php?id=477439341%20>. There is more information on Canvas about Respondus. Unfortunately, this software will NOT work on a Chromebook or Linux computer, so you will need to prepare for this.

All quizzes and tests will be taken using the Respondus Lockdown Browser. Once you have it downloaded, you will use this to enter Canvas. You will open this browser, and it will take you to Canvas to take your quiz. You will need to complete the quiz or test in the time allotted. More information will be available on Canvas in the Announcement section.

Grades

Discussion board postings	60 points = 5 modules (10 points each) + Introduction (10 points)
Quizzes	150 points = 12 quizzes (15 points each) – 2 lowest (15 points each)
Syllabus Quiz	10 points
Mid-term Exam	100 points
Final Exam	150 points

Total **470 points**

Grades will be assigned as follows:

- 100 – 90% - A grades (>98% = A+; 97-92% = A; 91-90%= A-)
- 89 – 80% - B grades (89-88% = B+; 87-82%= B; 81-80% = B-)
- 79 – 70% - C grades (79-78% = C+; 77-72%= C; 71-70% = C-)
- 69 – 60% - D grades (69-68% = D+; 67-62%= D; 61-60% =D-)
- 60% and lower – F grade

Other Course Policies

Late Work: Late work will not be accepted. If you have an extenuating circumstance, please contact me before the assignment/work is due to make alternate arrangements. I will require documentation in such cases.

Dropping the Class: In order to avoid getting an F for the course, it is your responsibility to officially withdraw from the course prior to the deadline. Withdrawing from a class is done through your secure student account in MyBlue.

Receiving an Incomplete: An incomplete ("I") is issued only if circumstances beyond your control (for example, hospitalization during finals week) prevent you from completing the required work for the class by the end of the semester. The circumstances preventing you from finishing the class must have arisen *after* the withdraw deadline. An incomplete grade will give you an *extension* to complete outstanding work only; it is *not* an opportunity to "start over" in the class. A contract must be signed detailing a timeline for completing the work, and all outstanding work must be completed within one year or the "I" grade *automatically* converts to a failing "F" grade. The conversion of an incomplete grade to a failing grade is university policy and is not within the control of instructor.

Ethics and Behavior

You should be following the highest ethical, academic, and professional standards. The University's Academic Integrity policy is listed in Article VI of the Student Handbook. UNK Student Handbook or (<http://www.unk.edu/offices/reslife.aspx?id=2402>). Use of proper language and maintaining appropriate decorum is expected during the course. Discussion boards will be moderated and any use of abusive/foul language will be dealt strictly and can result in expulsion from the university.

UNK Student Code of Conduct

Please review the student code of conduct (http://www.unk.edu/offices/reslife/Student_Handbook/). Anyone caught cheating will fail the course.

Students with Disabilities

It is the policy of the University of Nebraska at Kearney to provide flexible and individualized reasonable accommodation to students with documented disabilities. To receive accommodation services for a disability, students must be registered with the UNK Disabilities Services for Students (DSS) office, 175 Memorial Student Affairs Building, 308-865-8214 or by email unkdso@unk.edu

Academic Honesty Policy

Academic honesty is essential to the existence and integrity of an institution of higher education. The responsibility for maintaining that integrity is shared by all members of the academic community. To further serve this end, the University of Nebraska at Kearney has a policy relating to academic integrity. To ensure all students understand the expectations, UNK has adopted [Academic Integrity Policy](#).

UNK Academic Calendar- Fall 2022

Please take a note of the deadlines for dropping or withdrawing from the course
https://www.unk.edu/offices/registrar/academic_policies_handbook/Academic_Calendar.php

Last day to withdraw from one or more full-semester course for the term: November 11

Reporting Student Sexual Harassment, Sexual Violence or Sexual Assault

Reporting allegations of rape, domestic violence, dating violence, sexual assault, sexual harassment, and stalking enables the University to promptly provide support to the impacted student(s), and to take appropriate action to prevent a recurrence of such sexual misconduct and protect the campus community. Confidentiality will be respected to the greatest degree possible. Any student who believes she or he may be the victim of sexual misconduct is encouraged to report to one or more of the following resources:

- **Local Domestic Violence, Sexual Assault Advocacy Agency** 308-237-2599
- **Campus Police (or Security)** 308-865-8911

- **Title IX Coordinator** 308-865-8655

Retaliation against the student making the report, whether by students or University employees, will not be tolerated.

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Students Who are Pregnant

It is the policy of the University of Nebraska at Kearney to provide flexible and individualized reasonable accommodation to students who are pregnant. To receive accommodation services due to pregnancy, students must contact the Student Health office at 308.865.8218. The following links provide information for students and faculty regarding pregnancy rights. <https://thepregnantscholar.org/title-ix-basics/>

<https://nwlc.org/resource/faq-pregnant-and-parenting-college-graduate-students-rights/>

UNK Statement of Diversity & Inclusion

UNK stands in solidarity and unity with our students of color, our Latinx and international students, our LGBTQIA+ students and students from other marginalized groups in opposition to racism and prejudice in any form, wherever it may exist. It is the job of institutions of higher education, indeed their duty, to provide a haven for the safe and meaningful exchange of ideas and to support peaceful disagreement and discussion. In our classes, we strive to maintain a positive learning environment based upon open communication and mutual respect. UNK does not discriminate on the basis of race, color, national origin, age, religion, sex, gender, sexual orientation, disability or political affiliation. Respect for the diversity of our backgrounds and varied life experiences is essential to learning from our similarities as well as our differences. The following link provides resources and other information regarding D&I: <https://www.unk.edu/about/equity-access-diversity.php>

Veterans Services

UNK works diligently to support UNK's military community by providing military and veteran students and families with resources and services to help them succeed. Veterans Services assists with the GI Bill process and acts as a liaison between the student and the Veterans Administration. If you need assistance or would like more information, please contact Lori Weed Skarka at 308-865-8520 or unkveterans@unk.edu.

Additional Resources

******Tech Support:** Available through email at unkhelpdesk@unk.edu or phone 308-865-8363.

******Learning Commons (Tutoring):** The UNK Learning Commons offers support for this course! The Learning Commons, located on the 2nd floor of the Calvin T. Ryan Library, offers Subject Tutoring, the Writing Center, Success Coaching, and Language Support. These services are available to all UNK students in-person and on Zoom. The Learning Commons can help you with course content for select subjects, time-management skills, getting organized for class, and any type of writing project. To get the most out of your time with the Learning Commons, visit early and often! Contact the Learning Commons at 308-865-8905, unklearningcommons@unk.edu, or stop by in person. Website: www.unk.edu/lc

Course Schedule (Tentative)

Module 1- Foundations of Nervous System

This will comprise reading chapters 2, 6 and 7 from the text, reading supplemental research articles, and participating in discussion forum, and a quiz.

Module 2- Sensory and Motor Systems

This will comprise reading chapters 10, 11 and 12 from the text, reading supplemental research articles, and participating in discussion forum, and a quiz.

Mid-term Exam will be held after Module 2

Module 3- Brain, Behavior, and Emotion

This will comprise reading chapters 15 and 18 from the text, reading supplemental research articles, and participating in discussion forum, and a quiz.

Module 4- Sleep and Memory

This will comprise reading chapters 19 and 24 from the text, reading supplemental research articles, and participating in discussion forum, and a quiz.

Module 5- Language and Mental Illness

This will comprise reading chapters 20 and 22 from the text, reading supplemental research articles, and participating in discussion forum, and a quiz.

Final Exam will be comprehensive

Weekly Schedule (Tentative)

Weeks	Dates	Modules	Chapters Tested	Quizzes and Exams	
Week 1	08/22-08/26	Intro	Introduction forum	Syllabus Quiz	
Week 2	08/29-09/02	Module 1	Chapter 2- Neurons and Glia	Quiz 1	
Week 3	09/05-09/09	Module 1	Chapter 7- Structure of the Nervous System	Quiz 2	
Week 4	09/12-09/16	Module 1	Chapter 6- Neurotransmitter Systems	Quiz 3	
Module 1 Discussion Board due by Friday, Sep 16 (original post) & Sunday, Sep 18 (responses)					
Week 5	09/19-09/23	Module 2	Chapter 10- The Central Visual System	Quiz 4	
Week 6	09/26-09/30	Module 2	Chapter 11- The Auditory and Vestibular Systems	Quiz 5	
Week 7	10/03-10/07	Module 2	Chapter 12- The Somatic Sensory System	Quiz 6	
Module 2 Discussion Board due by Friday, Oct 07 (original post) & Sunday, Oct 09 (responses)					
Week 8	10/10-10/14	Module 3	Chapter 15- Chemical Control of the Brain and Behavior	Mid-Term	
Week 9	10/17-10/21	Module 3	Chapter 18- Brain Mechanisms of Emotion	Quiz 7	
Module 3 Discussion Board due by Friday, Oct 21 (original post) & Sunday, Oct 23 (responses)					
Week 10	10/24-10/28	Module 4	Chapter 19- Brain Rhythms and Sleep	Quiz 8	
Week 12	10/31-11/04	Module 4	Chapter 24-Memory Systems	Quiz 9	
Module 4 Discussion Board due by Friday, Nov 4 (original post) & Sunday, Nov 06 (responses)					
Week 13	11/07-11/11	Module 5	Chapter 20- Language	Quiz 10	
Week 14	11/14-11/18	Module 5	Chapter 22- Mental Illness	Quiz 11	
Week 15	11/21-11/25	THANKSGIVING BREAK			
Week 16	11/28-12/02	Module 5	Chapter 22 contd.	Quiz 12	
Module 5 Discussion Board due by Friday, Dec 2 (original post) & Sunday, Dec 4 (responses)					
Comprehensive Final Exam: (open from Monday, Dec 5 @ 8 am to Monday, Dec 12 @ midnight)					