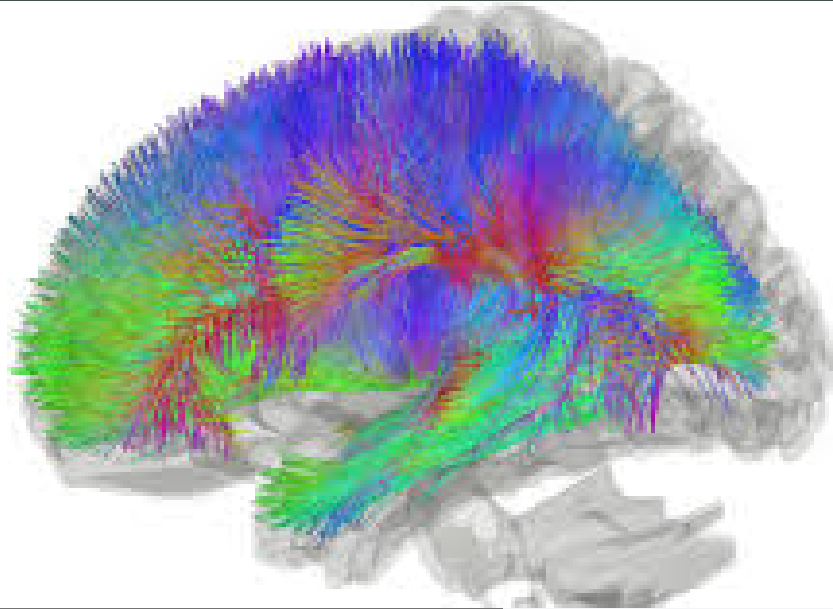


BIOL 352-01: NEUROBIOLOGY AND BEHAVIOR

Syllabus and Course Schedule



COURSE OVERVIEW

The nervous system controls every aspect of every interaction that a person has with the world whether it is collecting information from the environment or reacting to the environment. In this course we will explore the anatomy and physiology of the nervous system through the use of clinical neurology cases. We will examine the major nuclei, tracts, paths, and plexuses in the central and peripheral nervous systems and discuss how these areas work to produce behavior.

Learning Goals

BY THE END OF THE SEMESTER, YOU SHOULD BE ABLE TO:

- Identify the anatomical location and function of the major features of the central and peripheral nervous systems including:
 - Motor and somatosensory pathways
 - Major nerves including cranial and spinal nerves
 - Vascularization of the brain and spinal cord
 - Brainstem, cerebellum, limbic system, basal ganglia, hypothalamus, pituitary, and cerebral cortices.
- Review clinical neurological cases and interpret symptoms to develop hypotheses on areas of damage.
- Effectively communicate peer-reviewed published neuroscience literature orally as well as in writing
- Effectively collaborate with colleagues on group projects.
- Effectively source, evaluate the validity and reliability of information, and communicate neuroscience findings to the general public.

COURSE MEETINGS

Tuesdays and Thursdays
9:25 -10:40 AM

RITA 343

COURSE PREREQUISITES

BIOL 352: BIOL/PSYC 351 or PSYC 214. Co-requisite(s) or Prerequisite(s): MATH 250 or equivalent course in statistics.

Note: This course is cross-listed. A student may receive credit for BIOL 352 or PSYC 352 but not both.

REQUIRED TEXTS AND TECHNOLOGIES

Neuroanatomy Through Clinical Cases, 2nd Edition (2010). Hal Blumenfeld.

Additional materials will be posted on OAKS (<https://lms.cofc.edu>). Click on the link for BIOL/PSYC 352

Assignments and Grading

For each section that we cover, I have put together a list of learning goals and outcomes that I want you to achieve by the end of the semester. The following assignments will be used to assess your performance and success at meeting the learning goals in the class.

Assignments to help you integrate your learning into the world around you:

Neuroscience in the News – Neuroscience is a rapidly changing field with new discoveries published daily. To keep abreast of the newest discoveries, each student will be required to tweet to the class at once each week a current event (#CofCSystemsNeuro). The tweet should correlate to the topic of the week. Details on how to sign up and use Twitter are provided in a handout on OAKS.

Assignments to help you assess your basic comprehension of topics covered:

Standards Review/Quiz- this assures that you have the content knowledge, reading comprehension, and preparation for discussion and lecture. I will provide you with a list of standards or items that you should learn and understand based on the content that we discuss in class and that you are assigned to read in your textbook. Each Friday you will have the opportunity to demonstrate your competence for each set of standards by answering homework questions. These homework questions can be found on the course OAKs page under the “Quiz” tab.

Assignments to help you assess your ability to apply and synthesize your knowledge:

In depth Study on Neurological Disease or Disorder – you will have an opportunity to go more in-depth on a specialized topic related to this course that we weren’t able to specifically cover. In a 7-8 page APA-style paper, you will review the current scientific research available on a neurological disease or disorder of your choosing (prior authorization of topic is required). Specific specifications for the assignment will be posted on OAKS.

Case Studies – We will use case studies throughout the semester to assess and integrate our knowledge of the anatomy and physiology of various nervous system components with the behavioral outcomes of those systems. You will have the opportunity to write two case studies of your own. Specific guides and specifications for the case studies as well as a rubric for assessment will be posted on OAKS.

Midterm and Final Exam – in-class examinations that will focus on your ability to apply, analyze, and interpret the concepts that you have learned each week. Whereas the quizzes will focus on recognition and comprehension, the midterm and final exams will focus on higher order understanding and application.

No make-up exams will be given without PRIOR instructor’s permission. Unexcused absences from an exam will result in a zero for that exam. If a make-up is given, the exam may vary in format from the original. If you expect to have an excused absence on an exam day (athletic activity, etc), please contact me prior to your departure to make alternative arrangements. Please arrive on time to all exams; arriving late to an exam will not extend the exam period. No one will be permitted to start an exam once the first exam has been turned in.

Participation and Attendance Your attendance and active participation are critical to the success of this course. During the class periods we will engage in a lot of discussion. These discussions will be richer and more interesting if everyone participates and shares their knowledge. Thus, participation in the course will be graded. As a class, we will develop a rubric for this assessment.

LATE ASSIGNMENTS ARE NOT ACCEPTED AND WILL RESULT IN A ZERO FOR THE ASSIGNMENT.

Grading:

Standards Review/Quizzes	275 (11 X 25 points each)
Exams (midterm and final)	400 (2 x 200 points each)
Research Paper	155 (pt distributed according to guide on OAKS)
Case Studies	50 (2 x 25 points each)
Neuroscience in the News (Twitter Assignment)	60 (12 x 5 points each)
Attendance and Participation	<u>60</u>
	1000 points total

Grading Scale:

A	=	≥ 940	≥ 94%	C	=	740-769	74-76.99%
A-	=	900-939	90-93.99%	C-	=	700-739	70-73.99%
B+	=	870-899	87-89.99%	D+	=	670-699	67-69.99%
B	=	840-869	84-86.99%	D	=	640-699	64-66.99%
B-	=	800-839	80-83.99%	D-	=	600-639	60-63.99%
C+	=	770-799	77-79.99%	F	=	0-599	<59.99%

WEEK	DATE	TOPIC	READING	ASSESSMENT
Course Schedule is Subject to Change.				
1	Jan 9	Introduction and Historical Perspectives		
2	Jan 14 Jan 16 Jan 17	Survey of Human Neuroanatomy Neuroanatomical Research Methods: Neurologic Exam and Imaging	Chapter 2 Chapter 3 & 4 and reading on OAKS	Tweet due @ 9:25 AM Quiz 1 due @ 5PM
3	Jan 21 Jan 23 Jan 24	Cranium, Ventricles, and Meninges	Chapter 5	Tweet due @ 9:25 AM Quiz 2 due @ 5PM
4	Jan 28 Jan 30 Jan 31	Corticospinal Tract and Other Motor Pathways	Chapter 6	Tweet and Paper topic due @ 9:25 AM Quiz 3 due @ 5PM
5	Feb 4 Feb 6 Feb 7	Somatosensory Pathways	Chapter 7	Tweet due @ 9:25 AM Quiz 4 due @ 5 PM
6	Feb 11 Feb 13 Feb 14	Spinal Nerve Roots Peripheral Nerves and Major Plexuses	Chapter 8 Chapter 9	Case Study 1 & Tweet due @9:25 Quiz 5 due @ 5 PM
7	Feb 18 Feb 20 Feb 21	Cerebral Hemispheres and Vascular Supply	Chapter 10	Paper form due @ 9:25 AM Tweet due @ 9:25 AM Quiz 6 due @ 5 PM
8	Feb 25 Feb 27 Feb 28	Midterm Exam Brain Stem: External Characteristics and Cranial Nerves	Chapter 12	Participation Justification due Tweet due @ 9:25 AM
9	Mar 3 Mar 5 Mar 6	Brain Stem: Internal Structures and Vascular Supply	Chapter 14	Tweet due @ 9:25 AM Quiz 7 due @ 5 PM
10	Mar 10 Mar 12 Mar 13	Cerebellum	Chapter 15	Tweet & Paper draft (near final) due 9:25 Quiz 8 due @ 5 PM
11	Mar 17 Mar 19	Spring Break—No Class Spring Break—No Class		
12	Mar 24 Mar 26 Mar 27	Basal Ganglia	Chapter 16	Tweet due @ 9:25 AM Quiz 9 due @ 5 PM
13	Mar 31 Apr 2 Apr 3	Pituitary and Hypothalamus	Chapter 17	Tweet due @ 9:25 AM Quiz 10 due @ 5 PM
14	Apr 7 Apr 9 Apr 10	Limbic System	Chapter 18	APA paper due @ 9:25 AM Tweet due @ 9:25 AM Quiz 11 due @ 5 PM
15	Apr 14 Apr 16 Apr 17	Higher Order Cerebral Function	Chapter 19	Case Study 2 due @ 9:25 AM Tweet due @ 9:25 AM Quiz 12 due @ 5 PM
16	Apr 21 Apr 23 Apr 25	Reading Day Final Exam		Justification for Participation due Final Exam
Final Exam will be given during the Final Exam Period on Saturday, April 25, 8-11 AM in our classroom.				

*The neuroscience in the news tweets will be due each Thursday no later than the start of class. You must complete a tweet each week (as defined as Thursday at 10:50 AM through the following Thursday at 9:25 AM. Tweets are not due for weeks that include Spring break (3/17), the first week of class (1/9), or the final week of class (4./21).



DR. JENN WILHELM

WILHELMJC@COFC.EDU

55 COMING ST., RM 103
OFFICE HOURS: in RITA 343

Wednesdays 4-5 PM; Thursdays 7:15 - 9:15 AM



EMAIL

I strive to respond to emails in a timely manner. Emails received M-F from 8-5 PM will be returned within 24 hours. Emails received after normal business hours may not be returned before the next business day. Please use your g-mail/institutional email account when sending class correspondence and include the course name in the subjectline.

NAMES AND IDENTITIES MATTER!

I will gladly honor your request to address you by the name and gender pronouns of your choice. I use she/her/hers pronouns. Please advise me as early as you feel comfortable of your preferences.

ACADEMIC HONESTY

Lying, cheating, attempted cheating, and plagiarism are violations of our Honor Code that, when identified, are investigated. Each incident will be examined to determine the degree of deception involved. Incidents where the instructor determines the student's actions are related more to misunderstanding and confusion will be handled by the instructor. The instructor designs an intervention or assigns a grade reduction to help prevent the student from repeating the error. The response is recorded on a form and signed both by the instructor and the student. It is forwarded to the Office of the Dean of Students and placed in the student's file. Cases of suspected academic dishonesty will be reported directly by the instructor and/or others having knowledge of the incident to the Dean of Students. A student found responsible by the Honor Board for academic dishonesty will receive a XXF in the course, indicating failure of the course due to academic dishonesty. This status indicator will appear on the student's transcript for two years after which the student may petition for the XX to be expunged. The F is permanent. Students can find the complete Honor Code and all related processes in the Student Handbook.

TECHNICAL ISSUES

If you have questions about course content, please email Dr. Wilhelm promptly. If you experience technical problems, please contact Student Computing Support Desk (phone: 843-953-5457) or email: studentcomputingsupport@cofc.edu.

ATTENDANCE AND PROFESSIONALISM

Your participation is critical to the success of this course. During the semester we will work together to better understand the issues surrounding psychopharmacology. This is a discussion based course meaning that the majority of class time will be used for students to talk about the readings and assignments with one another. Please use professional etiquette and be mindful of your language when conversing with your classmates. Everyone has a valuable point of view, and diversity must be respected. Active engagement is critical for course success. Computers, cell phones, headphones, and disruptive conversation are not permitted in the classroom, as they are disrespectful to those who are actively engaged in the learning process. Please turn off all devices before class begins.

Attendance:

Attendance will be taken daily. Points will be deducted for unexcused absences. Arriving more than fifteen (15) minutes late will count as an unexcused absence. Absences will not be excused unless permitted in writing by the Absence Memo Office. Official excuses from the Absence Memo Office must be presented to the instructor within one week of returning to class. It is your responsibility to make up for missed class time by getting notes from other students, learning about announcements, and learning information presented during class time. There are no unimportant class periods; it is your responsibility to keep up. Missing more than 6 classes (that is 3 weeks!) throughout the semester will result in being withdrawn from the class and assigned a grade of WA.

ADDITIONAL RESOURCES

SNAP SERVICES:

This College abides by section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act. If you have a documented disability that may have some impact on your work in this class and for which you may require accommodations, please see an administrator at the Center of Disability Services/SNAP, 843.953.1431 or me so that such accommodation may be arranged.

FINANCIAL CHALLENGES

If a student has difficulty affording groceries or getting sufficient food to eat every day, or who lacks a safe and stable place to live, and believes this may affect their performance in the course, please contact the Dean of Students for support. Furthermore, please notify me if you are comfortable in doing so. We can assist you with identifying available resources.

WEATHER/COLLEGE CANCELLATIONS

the College of Charleston closes and members of the community are evacuated due to inclement weather, students are responsible for taking course materials with them in order to continue with course assignments consistent with instructions provided by faculty. In cases of extended periods of institution-wide closure where students have relocated, instructors may articulate a plan that allows for supplemental academic engagement despite these circumstances.