

Neuropsychology

Summer 2018
Tuesday/Thursday 6:00pm-9:40pm
Hill Center - Busch Campus
Room 116

Instructor: Janace Gifford

Office hours: By appointment

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Course Description

Neuropsychology is the study of brain-behavior relationships in which the focus is on the human brain. It is a branch of neuroscience that traditionally has relied more on clinical case studies as a source of information for identifying the functional significance of various regions of the brain. However, basic laboratory research using animal models has provided (and continues to provide) a wealth of information that has been extrapolated to human brain function. In recent years, the ascendance of cognitive neuroscience, a branch of cognitive science that correlates brain activity with normal psychological processes in healthy, unimpaired human subjects, has served to extend the domain of neuropsychological investigation. In essence, whether it's called neuropsychology, behavioral neurology, or cognitive neuroscience, the ultimate goal is prediction and understanding of what parts of the brain serve as the basic substrates for measurable ongoing behavior. As such, this information serves to aid the diagnosis and treatment of many different behavioral disorders ranging from acquired or inherited deficits in language and cognition, to severe neuropsychiatric conditions such as Alzheimer's dementia and schizophrenia. The course will provide the basis for appreciating the many different ways in which behavior has been related to specific regions of the human brain and will cover basic neuroanatomy, neuropsychological testing, the newer methodologies used by cognitive neuroscience such as neuroimaging, and proceed to a more detailed description of how the brain allows for the expression and processing of emotion, language, thought, and memory.

Required Materials

Required Texts:

Cognitive Neuroscience: The Biology of the Mind (Fourth Edition) By Michael S. Gazzaniga, Richard B. Ivry and George R. Mangun. Publisher: W. W. Norton & Company; 4th edition (October 1, 2013) ISBN-13: 978-0393913484 ISBN-10: 0393913481

Course website:

If you are properly registered for the course, you have access to the course website through Sakai. Copies of all slides and handouts, study guides, and special notices will be posted here. It is important to note that the syllabus is subject to change – please consistently check the syllabus on Sakai so that you are aware of these changes. You are responsible for all the information contained in this syllabus, and for all changes to the syllabus that I announce in class or post on the website.

Learning Goals

After taking this course, students should be familiar with:

1. Methods for assessing normal and abnormal brain function at the structural and physiological level in human and non-human primates

2. Neuropsychological approaches to assessing the consequences of brain damage
3. The functional properties of the cerebral cortex in human and non-human primates
4. Functional differences between the left and right cerebral hemispheres
5. The relationship of neuropsychology to cognitive neuroscience approaches to understanding
 - a. Sensation and Perception
 - b. Goal-directed actions
 - c. Attention
 - d. Learning and memory
 - e. Emotion
 - f. Language
6. The neurocognitive basis of psychiatric disorders

Attendance and Assignments Policy

Attendance

Because this course is challenging and we cover a lot of material in every class, you are expected to attend every class. Inconsistent attendance will result in a lowered grade. If you miss three or more classes, you will automatically receive an “F” for the course. In addition, **you must arrive on time to lecture**. Meaningful attendance in class is essential, as class lectures, discussions, and demonstrations will include information not covered in the text. By *meaningful*, I refer to being awake, prepared, attentive to the instructor, fellow students, and presenters, and respectful to the instructor and fellow students. If you are not in class, are sleeping, are inattentive, or disrespectful, you will be marked absent for that class session and receive a zero for any assignments for that class day. If you miss class it is your responsibility to obtain notes and/or handouts from your classmates.

Cell phones

Cell phone interruptions are unnecessary, as phones are generally not part of your learning in this class. Please ensure that your cell phone does not ring during class. Text messaging, snapchatting, etc. during class time is inappropriate, and using the phone as a clock can be disruptive.

Computer Issues

You may bring laptop to lecture to take notes and it may be helpful to use in some in class activities. As such, it is expected you will follow along with the course whether through lecture PowerPoints or in-class activities. During class time you should not be on social media sites or surfing the Internet. If I find you distracted by your computer or on an unrelated site you will receive a zero for attendance that day.

Assignments

- Some assignments will be in class assignments, often completed in small groups. Any in class work not completed during class must be submitted before the start of the next class via sakai.
- All of your work will be turned in via the Sakai Assignments tab, which automatically checks Turnitin.com, so the authenticity of your work is visible to both you and the course instructor.
- Please type all assignments using general APA guidelines (i.e., **12-point, Times New Roman font, 1” margins on all sides**).

Make-up Assignments:

- You CANNOT make up any of the take-home assignments.
- If you have an excused absence for an in-class exercise (that is, with a Dean's note or other comparable notification), you may complete a make-up assignment. This will usually consist of a 1- 2 page reaction paper to a paper published in the field of psychology. Your ability to make up an assignment will be determined on a case-by-case basis; you should not assume that you will be able to make up an assignment just because you missed class. It is your responsibility to request the opportunity to do a make-up assignment within 24 hours of the due date.
- Missed assignments that are not excused will be given a "0." Late and excused assignments will be docked one deserved point for up to three days. Assignments more than three days late will not be accepted, **no exceptions.**

Grading:

Exams: There will be 3 exams in this course. Exams 1 and 2 will be a mixture of written and multiple choice questions. The first exam will account for 20% of the total grade. Exam 2 will account for 20% of the total grade. The Final Exam will be all multiple choice and worth 30% of the total grade. Therefore, exams make up 70% of your final grade in the class

Quizzes: There will be three quizzes of multiple choice questions each Thursday when no exam is scheduled. The quizzes are based on the content of the previous two class. All seven quizzes will account for 15% of the total grade.

Presentation Assignments: One goal of this course is to enhance your ability to articulate your knowledge about topics of cognitive neuroscience in a public forum. To achieve these goals you will work in small groups to present materials to the class. Presentations will be graded for creativity and accuracy, as assigned. The presentations will account for 10% of your final grade.

Class participation/Attendance: I expect all in class to join in discussions to contribute to the class. You are expected to participate during class both by asking questions and actively listening to others. Be both vocal and patient. Try to answer the questions that I pose and ask questions yourself. I tend to talk fast at times so ask me to repeat what I said when I have been unclear. If I make a mistake, point it out for me. This grade will be a culmination of attendance, classroom behavior, completion of activities in class/lab, and respectful behavior towards students and instructor. This will account for 5% of your final grade.

Grading System:

- Students will need to achieve predetermined cut-off points for grades of A, B, and so on. Cut-off points will be as follows:
 - A = 90 higher
 - B = 80-89.9
 - C = 70-79.9
 - D = 60-69.9
 - F = Below 60

Extra Credit:

Students can choose to undertake additional work in order to receive extra credit. The extra credit will be earned by answering additional questions in the Final Exam. These questions will pertain to target articles that will be posted through Sakai once Exam 1 has been taken and graded. Reading these articles is not mandatory, but if you have fallen behind, you may wish to read the

articles and answer relevant questions in the Final Exam. Answering all extra credit questions correctly will earn 5% extra credit. The maximum score one can earn is 100% in this course.

Makeups:

I vigorously verify all excuses for missing an exam. If you do miss an exam, it will be a different exam that you will be asked to take. If the exam is missed for a legitimate and verifiable reason, the student must sit for the makeup within three weekdays of the scheduled date for the missed exam. Written and signed documentation will be required, and since the makeup will allow for more study time, the written component of the exam will look for evidence of greater and more precise understanding.

IMPORTANT: Failure to take the makeup within three weekdays of the scheduled exam will mean that you will have to take it during the period between the final class and the final exam. This will be the only opportunity to take a missed exam prior to the final exam. **THERE ARE NO MAKEUP EXAMS AFTER THE FINAL EXAM (unless you have a conflict with another class, and which is acknowledged on the SAS website for exam schedules and rules concerning conflicts).**

Rutgers athletic obligations, religious events, weddings, etc. that are going to interfere with taking the scheduled exams will require that you take the exam earlier than scheduled. It is up to you to anticipate the conflict, and let me know about these upcoming events so I can administer the exam earlier. If you don't take the exam, then you will either (i) fail to receive any points, or (ii) have the option to take the missed exam during the period between the final class and the final exam.

Students with Disabilities Rutgers

University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office on the campus where you are officially enrolled, participate in an intake interview, and provide documentation:

<https://ods.rutgers.edu/students/documentationguidelines>. If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. To begin this process, please complete the Registration form on the ODS web site at <https://ods.rutgers.edu/students/registration-form>.

LECTURE TOPICS AND ASSIGNMENTS:

****(All dates are approximate and changes will be announced in class)****

Date	Topic	Chapters (read <u>BEFORE</u> class) and in class activities
5/29	<ul style="list-style-type: none"> • Course overview • Introduction and History 	<ul style="list-style-type: none"> • Chapter 1 • Work with groups on presentations for next class
5/31	<ul style="list-style-type: none"> • The Nervous System: Central vs Peripheral Nervous System • Structure and Function of the Nervous System 	<ul style="list-style-type: none"> • Read chapter 2

6/5	<ul style="list-style-type: none"> • Methods in Cognitive Neuroscience • Hemisphere specialization 	<ul style="list-style-type: none"> • Quiz 1 • Chapter 3 • Presentation on chapter 3 • Chapter 4
6/7	<ul style="list-style-type: none"> • Vision • *Auditory • Object Recognition 	<ul style="list-style-type: none"> • Chapter 5 and 6 *article selected for presentation
6/12	EXAM I	
6/14	<ul style="list-style-type: none"> • Action • Attention 	<ul style="list-style-type: none"> • Chapter 8 and 9
6/19	<ul style="list-style-type: none"> • Memory • Emotion • *Papers for extra credit posted 	<ul style="list-style-type: none"> • Chapter 9 and 10 • Quiz 2 • Presentations on article
6/21	<ul style="list-style-type: none"> • Language 	<ul style="list-style-type: none"> • Chapter 11
6/26	EXAM 2	
6/28	<ul style="list-style-type: none"> • Cognitive Control • Review 	<ul style="list-style-type: none"> • Chapter 12
7/3	NO CLASS	
7/5	FINAL EXAM	