

Cognitive Neuroscience
Psychology 315
Spring 2013
5:10 – 6:25 p.m. Tuesday and Thursday
Bullock Science Center, 103W

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Office Hours: Tuesday and Thursday 3:30-4:30p.m., or by appointment

Human cognition and perception and their neurophysiological correlates as revealed by functional imaging techniques and clinical populations. Selected topics include basic neuroanatomy and brain imaging techniques and their application to the study of attention, memory imagery, concept formation, language, problem solving, creative thinking and intelligence.

Prerequisite: PSY-101 or PSY-102 (but PSY-102 is preferred), PSY-206, PSY-207 or BIO-210

REQUIRED READING MATERIAL

Gazzaniga, M. S., Ivry, R. B., Mangun, G. R. (3rd Edition). *Cognitive Neuroscience: The Biology of the Mind*.

Reading Assignments: In this course the textbook provides a good foundation of research statistics. In class we will apply this material using demonstrations, group discussions, videos, surveys, and lecture. Additional related information not in your textbook will be covered in class.

Students also should be aware of the fact that not all of the material in the textbook can be covered in class, but they are responsible for knowing all of the material in the textbook even if it is not covered in class. To learn the most from the course students should keep up with the reading assignments and come to class.

CLASS COMPONENTS

Attendance “Quiz” Points: It is important to attend lectures in this course, as lectures will involve demonstrations, classroom activities, films, and discussion of material not covered in the textbook. Students are expected to attend class regularly, as regular attendance will contribute to a better overall understanding of course material.

Attendance will be taken at every class meeting. This will be done in the form of a “quiz” at the *beginning of each class*. I will present you with a question(s) and give approximately 5 minutes to make your response without referring to your textbook or notes. Your answer(s) will be submitted with your name and this will serve as your attendance. Your responses won’t be graded as correct or incorrect, but I will keep track to monitor how the class is keeping up. This is also a good way for you to help identify areas that you might need to study more. This practice is actually in place to help you! Research suggests that repeated **retrieval** is the most effective way to learn. My goal is that by having you actively retrieve the information throughout the semester, you will better learn and remember the information from the course.

There are 25 class meetings this semester (excluding test days). As you will see detailed in the “Point Allocation” section, attendance quizzes contribute 20 points to your total score. What this means for you is that if you exceed 20 points (by attending everyday or only missing a few days), these will be extra points added to your total score. You can miss up to 5 days of attendance quizzes without it impacting your total points. Also, if you are late for class and miss the quiz, you cannot retake it and will forfeit your point for the day. If you have an absence excused by the college (e.g., observed religious holiday, death of an immediate family member, participating in a college sporting event, unplanned hospitalization), see me before the absence to discuss.

Students are expected to actively participate in class discussions and demonstrations. Students are welcomed and encouraged to share their questions, ideas, and insights during class discussions and lectures as long as they do not dominate the conversations. They are expected to respect the values, beliefs, and rights of others in the classroom. Also, students are expected to pay attention to whomever is speaking in class. Students should NOT text or use computers for reasons other than notes. This means no facebook, twitter, email, itunes, youtube, foursquare, pinterest, or anything unrelated to course material! This behavior not only distracts from your ability to learn in my class, but it disrespects and violates the right of other students to attend class and learn in a focused environment. Any students involved in side-conversations unrelated to class discussion, any of the above activities, or in any other behavior that is potentially disruptive to other students’ learning may lose their attendance quiz point for the day at the Professor’s discretion.

Tests and Final Exam: For this class there will be 3 tests. The tests will have short-answer and multiple-choice questions from the material covered in class and the textbook. There will not be a final exam, but a research paper will be due during finals week.

Students are expected to take all tests on the scheduled dates. If an extreme circumstance (illness and workload do not apply) arises then the student should contact the professor prior to the test and the professor will decide what will be done.

To do well on the tests, students must come to class and read the class materials very carefully. Historically, students that have

done the best have read the textbook carefully several times, taken notes from the textbook, and studied several days prior to the tests.

Research Project: The research project will consist of three primary components: written proposal, annotated bibliography and final written paper. You can work alone or in groups of up to 3. If you work in a group, you will carry out all aspects of the project together and each individual will receive the same grade. Once you have selected your group and submitted your written proposal, your group membership cannot be changed. In most workplaces today, group projects are common. You will need to learn to deal with possible interpersonal conflicts and be sure that everyone is carrying their own weight in the project.

Topic

You can select any topic within cognitive neuroscience. For example, consciousness, blindsight, change blindness, lie detection, prosopagnosia, split-brain patients, visual agnosia, amnesia, episodic memory, prospective memory, long-term potentiation, aphasia, spatial attention, etc. However, the world is your oyster, so feel free to come up with your own topic. The goal will be to summarize the existing knowledge on the topic and propose the “next important step” in the form of a research idea. You can start with the information in your textbook, but you will need to read the primary scientific literature as well and summarize it in the paper.

Written Research Proposal

With your teammates (if applicable), you will develop a written research proposal, outlining a brief discussion of your topic and the study that you propose. Further details of the proposal, and a rubric for grading, will be provided during the semester. This is worth a total of 30 possible points.

Annotated Bibliography

With your teammates (if applicable), you will prepare an annotated bibliography summarizing the papers relevant to your topic. Further details of the bibliography and a grading rubric will be provided during the semester. This is worth a total of 50 possible points.

Written Final Research Paper

You and your teammates (if applicable) will write a final version of your research study. The final version must be in APA style. Further details of the paper, and a rubric for grading, will be provided during the semester. This is worth a total of 100 possible points.

Course Journal: You will need to keep a journal about your experiences and reactions to the knowledge gained in this course. You need to complete one entry per week. Each entry should be approximately half a page typed (or two well written paragraphs). Entries can focus on something new you learned, or something that surprised you, a personal reaction to course content, or perhaps something you read about or heard about in the news/television/movies that relates to Cognitive Neuroscience. You must write these each week starting with the week of Tuesday January 22. These should be typed in the template provided and a printed version should be turned in. There will be two journal checks throughout the semester and the entire journal will be due on the last day of class. Each journal entry is worth a possible 5 points for a total of 75 points. Entries will be graded at each check (i.e., Journal entry 1 will be graded during your first journal check), but you must submit the entire journal at the end of the semester.

OTHER INFORMATION ABOUT THE CLASS

Disability Accommodations: All accommodations for disabilities are authorized through the Office of Academic Advising (please see the contact information listed below). If you are registered with them, please discuss the course and the necessary accommodations with the professor. Both Academic Advising and the faculty respect students' confidentiality when accommodations are made.

Kelly Deasy, Coordinator of Student Disability Services
Office of Academic Advising and Student Disability Services
Buttrick 104b
[404-471-6174](tel:404-471-6174)
kdeasy@agnesscott.edu

Course Evaluations: Students' feedback about this course is valuable to the professor, the psychology department, and the college administration. Students' comments are taken seriously and the comments are used to improve the course in the future. Students will be asked to complete evaluations of the course at the end of the semester.

ACADEMIC HONESTY

The Agnes Scott College honor code embodies an ideal of character, conduct, and citizenship, and is an important part of the College's mission and core identity. This applies especially to academic honesty and integrity. Passing off someone else's work as your own represents intellectual fraud and theft, and violates the core values of our academic community. To be honorable, you should understand not only what counts as academic dishonesty, but also how to avoid engaging in these practices. You should:

- review each course syllabus for the professor's expectations regarding course work and class attendance.
- attribute all ideas taken from other sources; this shows respect for other scholars. Plagiarism can include portraying another's work or ideas as your own, buying a paper online and turning it in as if it were your own work, or not citing or improperly citing references on a reference page or within the text of a paper.
- not falsify or create data and resources or alter a graded work without the prior consent of your professor. This includes making up a reference for a works cited page or making up statistics or facts for academic work.
- not allow another party to do your work/exam, or submit the same or similar work in more than one course without permission from the course instructors. Cheating also includes taking an exam for another person, looking on another person's exam for answers, using exams from previous classes without permission, or bringing and using unauthorized notes or resources (i.e., electronic, written, or otherwise) during an exam.
- not facilitate cheating, which can happen when you help another student complete a take home exam, give answers to an exam, talk about an exam with a student who has not taken it, or collaborate with others on work that is supposed to be completed independently.
- be truthful about the submission of work, which includes the time of submission and the place of submission (e.g., e-mail, online, in a mailbox, to an office, etc.).

You should understand that penalties result from dishonest conduct, ranging from failure of the assignment to expulsion from the college. You should speak with your professors if you need clarification about any of these policies.

Modified Pledge

Students pledge that they have completed assignments honestly by attaching the following statement to each test, quiz, paper, overnight assignment, in-class essay, or other work:

I pledge that I have neither given nor received any unauthorized aid on this assignment.

(Signed) _____

POINT ALLOCATION

Test 1	100
Test 2	100
Test 3	100
Attendance "Quiz" Points (can earn up to 25***)	20
Research Proposal	30
Annotated Bibliography	50
Research Paper	100
<u>Journal</u>	<u>75</u>
Total Points	575

GRADING SCALE (%)

A = 93 - 100	A - = 90 - 92
B+ = 87 - 89	B = 83 - 86
B - = 80 - 82	C+ = 77 - 79
C = 73 - 76	C - = 70 - 72
D+ = 67 - 69	D = 63 - 66
D - = 60 - 62	F = 59 or less

***Reminder – there are 25 days on which attendance quizzes will be given. So by attending class every day, you can earn up to 5 extra points added to your total points score.

Research Design and Methods Schedule

(Although every effort will be made to follow the syllabus, I reserve the right to make changes.)

Class Date	To Read Before Class	General Topic	Project Due Date
Thurs. Jan. 17		Introduction	
Tues. Jan. 22	Chapter 1	A Brief History of Cognitive Neuroscience	
Thurs. Jan. 24	Chapter 2	Cellular Mechanisms	
Tues. Jan. 29		Neuroanatomy and Development	
Thurs. Jan. 31	Chapter 3	Neuroanatomy and Development	
Tues. Feb. 5	Chapter 4	Methods of Cognitive Neuroscience	
Thurs. Feb. 7		Methods of Cognitive Neuroscience	Research Proposal
Tues. Feb. 12	Chapter 15	Evolutionary Perspectives	
Thurs. Feb. 14		Evolutionary Perspectives	Journal Check #1
Tues. Feb. 19		Test 1	
Thurs. Feb. 21	Chapter 5	Sensation and Perception	
Tues. Feb. 26		Sensation and Perception	
Thurs. Feb. 28		NO CLASS – Reading Day!	
Tues. March 5	Chapter 6	Object Recognition	Annotated Bibliography
Thurs. March 7	Chapter 7	The Control of Action	
Tues. March 12		SPRING BREAK!	
Thurs. March 14		SPRING BREAK!	
Tues. March 19	Chapter 8	Learning and Memory	
Thurs. March 21		Learning and Memory	
Tues. March 26	Chapter 9	Emotion	
Thurs. March 28		Test 2	
Tues. April 2	Chapter 10	Language	Journal Check #2
Thurs. April 4		Language	
Tues. April 9	Chapter 11	Hemispheric Specialization	
Thurs. April 11	Chapter 12	Attention and Consciousness	
Tues. April 16		Attention and Consciousness	
Thurs. April 18	Chapter 13	Cognitive Control	
Tues. April 23	Chapter 14	Social Cognition	
Thurs. April 25		Social Cognition	
Tues. April 30		Test 3	Journal Due
May 2-8		Final Exam Week (Research Paper Due)	