

PSYC 4140: Cognitive Neuroscience
T/Th 3:30 – 1:45 PM, Psychology Building 120
Spring 2018

Instructor: Emily Hallowell, M.A.
E-mail: Emily.hallowell@uga.edu
Office: Psychology Building 124
Office hours: By appointment

The course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary.

General Course Description: (1) The origins and principles of cognitive neuroscience and the types of research that are conducted in the field, (2) Classic, seminal, and current studies on how the brain performs various tasks (e.g., language, memory, attention, perception), (3) Also, the variety of different brain imaging techniques available to scientists in the field of neuroscience (e.g., MRI, fMRI, PET, CT, EEG and MEG) will be discussed.

Primary Course Objectives: (1) To provide a broad overview of the field of cognitive neuroscience. (2) To understand classical and current research on how the brain affects performance on various tasks. (3) To gain an understanding of available imaging techniques.

Required Prerequisites: PSYC 2980 or PSYC 3980 (Research Design in Psychology)

Prerequisite or Co-requisites: PSYC 2990 or PSYC 3990 (Research Analysis in Psychology)

Required Text:

1. Gazzaniga, M., Ivry, R. B., & Mangun, G. R. (2013). *Cognitive Neuroscience: The Biology of the Mind* (4th ed.). New York, NY: W. W. Norton & Company, Inc. ISBN: 978-0-393-91348-4.
2. The Tell-Tale Brain: A Neuroscientist's Quest for What Makes Us Human (paperback) by V.S. Ramachandran

Assignments:

Exams: (70% of Grade) There will be four non-cumulative exams throughout the semester. Exams will include a mix of multiple choice and short answer. Students will have one class period to complete each exam. Any material covered in the assigned readings or lectures is fair game. Please note that the fourth exam (also non-cumulative) will be administered during the final exam period scheduled for this course by the university. See the course schedule below for tentative exam dates, keeping in mind that the dates may be subject to change due to changes in the course schedule.

Paper (15% of Grade): Students will select a topic of personal/professional interest within the field of cognitive neuroscience and write a brief, 3-4 page introduction to a research proposal on

that topic. Students will conduct a literature review, form a hypothesis, and write a proposal for a research project. The paper should include your research idea, an analysis of 3 research articles, and your hypothesis. The paper will consist of 3-4 pages of writing plus a *separate* title page and reference list (in APA style). Further details and specific guidelines for the papers will be provided to students in class. Although not required, students are encouraged to consult the instructor(s) well prior to the paper due date to verify that their chosen topic is appropriate.

The paper is due at the beginning of class on: Friday, March 27.

Discussion Participation (15% of grade): A portion of the student's grade will be based on discussing the readings from the text **"The Tell-Tale Brain" by V.S. Ramachandran** on discussion days. Students are expected to come to class having carefully read and critically considered the assigned reading for that day in advance. Receiving full points in this category requires more than showing up physically to class; students are expected to thoughtfully discuss, question, and critique the material.

In order to facilitate discussion each student is assigned to complete 4 discussion points. Discussion points are due to me in email by 3:30 pm the day prior to the day that we will be discussing the readings (see schedule: **DP due**). Discussion points should consist of one sentence (minimum) about each of the following:

- Something you thought was interesting (changed your thinking)
- Some new questions you have, inspired by the reading
- Some new information you learned in response to the reading (e.g., searching something you found interesting online)

Grading:

The grading breakdown is as follows:

Exam 1	17.5%
Exam 2	17.5%
Exam 3	17.5%
Exam 4	17.5%
Paper	15%
Discussion Participation/ Points	15%

The following scale will be used to assign grades:

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

Attendance and Participation: While attendance is not mandatory for this course, you are responsible for all the information communicated in class. In some classes, important information concerning assignments will be provided, and new material may be covered that is

not available in the textbook. All material covered in the lectures is fair game for the exams, so it is in your best interest to attend class regularly. If you miss a class, you must get this information from one of your classmates. The instructor will not re-teach you material covered during missed class, nor will we provide you with lecture notes.

*Even though attendance is not mandatory, at the discretion of the instructor bonus questions will be asked of the students at the end of randomly selected classes. These questions will be related to course material taught during the lecture, and will be worth one extra credit point that will be added to the score of the student's lowest exam.

Course Policies

Professional Classroom Behavior: While spirited dialogue and differing viewpoints are highly encouraged, students are expected to consistently demonstrate respect and professionalism toward one another and the instructor(s). Electronic devices (e.g., laptops, smart phones) should be used only for engaging in activities directly relevant to the class (e.g., note-taking).

Make-up Examination Policy: Exams must be taken as scheduled. Exams can be rescheduled or made-up only under extreme circumstances and if the student provides appropriate documentation of an emergency. Make-up exams must be completed within 1 week of the regularly scheduled exam. If the student is aware ahead of time that he/she will be unable to take the exam at the regularly scheduled time due to a university-sanctioned activity, religious holiday, etc., he/she must inform the instructor of the conflict as **soon as it arises, and not afterward**. If the absence is an emergency, as in the case of extreme illness or some other extenuating circumstance, the student must inform the instructor **immediately** and provide documentation of the emergency. Unexcused absences from exams will result in a grade of zero (0%) for the missed exam.

Incompletes: A grade of incomplete is only assigned in extremely unusual circumstances/ severe emergencies at the discretion of the instructor. Such situations require extensive documentation and approval of faculty supervisors. It is only an option if a student is passing the class and is typically only awarded when a student has completed the majority of the classwork and is only missing one or two exams or assignments. If a grade of incomplete is approved, a written plan for completion of the coursework must be developed by the instructor and student and approved by the faculty supervisor.

Borderline grades (e.g., 89%, 79%, 69%): No changes will be made to the earned grades, regardless of scores are in the borderline range.

University Honor Code and Academic Honesty Policy: As a University of Georgia student, you have agreed to abide by the University's academic honesty policy, "A Culture of Honesty," and the Student Honor Code. All academic work must meet the standards described in "A Culture of Honesty" found at: <https://ovpi.uga.edu/academic-honesty/academic-honesty-policy>. Lack of knowledge of the academic honesty policy is not a reasonable explanation for a violation. Questions related to course assignments and the academic honesty policy should be directed to the instructor(s).

For this course, students are to work independently on their tests and activities. The use of test files and any sharing of test questions or answers with other students will be considered a violation of the honor code. Additionally, using “sample” papers from websites providing notes, tests, and papers will be considered a violation of the honor code. All papers are to adhere to APA style for citations and references of other work. Failure to properly cite previous work, as set forth by the standards in the APA Publication Manual, may be considered plagiarism and a violation of the honor code.

Students with Disabilities: If you have a disability and require reasonable classroom accommodations, please see me after class or make an appointment to meet. If you plan to request accommodations, please register with the Disability Resource Center at 114 Clark Howell Hall, 706-542-8719 (voice), 706-542-8778 (tty), http://drc.uga.edu/contact_request.php.

Course Schedule*

*Please note that this is a *tentative* plan for the course and is subject to change.

<i>Date</i>	<i>Day of week</i>	<i>Topic</i>
1/4	Thursday	Syllabus and introductions; Chapter 1: A Brief History of Cognitive Neuroscience
1/9	Tuesday	Chapter 1: A Brief History of Cognitive Neuroscience Chapter 2: Structure and Function of the Nervous System
1/11	Thursday	Chapter 2: Structure and Function of the Nervous System LAST DAY OF DROP/ADD 1/10
1/16	Tuesday	Chapter 3: Methods of Cognitive Neuroscience
1/18	Thursday	Chapter 3: Methods of Cognitive Neuroscience Chapter 4: Hemispheric Specialization
1/23	Tuesday	Chapter 4: Hemispheric Specialization
1/25	Thursday	Discussion Day *DP Due 2pm on 1/29 Review Session for Exam 1
1/30	Tuesday	EXAM 1
2/1	Thursday	Chapter 5: Sensation and Perception Discuss paper guidelines
2/6	Tuesday	Chapter 5: Sensation and Perception
2/8	Thursday	Chapter 6: Object Recognition
2/13	Tuesday	Chapter 6: Object Recognition Chapter 7: Attention
2/15	Thursday	Chapter 7: Attention
2/20	Tuesday	Chapter 8: Action
2/22	Thursday	Chapter 8: Action
2/27	Tuesday	Discussion Day *DP Due 2pm on 2/26 Review Session for Exam 2
3/1	Thursday	EXAM 2
3/6	Tuesday	Chapter 9: Memory
3/8	Thursday	Chapter 9: Memory

3/12-3/16	---	NO CLASSES: SPRING BREAK
3/20	Tuesday	Chapter 10: Emotion Withdrawal Deadline: 3/19
3/22	Thursday	Chapter 10: Emotion
3/27	Tuesday	Chapter 11: Language **PAPER DUE BY 3:30 PM TODAY**
3/29	Thursday	Chapter 11: Language
4/3	Tuesday	Discussion Day *DP Due 2pm on 4/16 Review Session for Exam 3
4/5	Thursday	EXAM 3
4/10	Tuesday	Chapter 12: Cognitive Control
4/12	Thursday	Chapter 12: Cognitive Control Chapter 13: Social Cognition
4/17	Tuesday	Chapter 13: Social Cognition Chapter 14: Consciousness, Free Will, and the Law
4/19	Thursday	Chapter 14: Consciousness, Free Will, and the Law
4/24	Tuesday	Discussion Day *DP Due by 2pm on 4/23 Review Session for Exam 4
4/26	Wednesday	READING DAY
5/3	Thursday	EXAM 4 Will take place during “final exam” timeslot: 3:30 – 6:30 PM