

**PSYC 4140: Cognitive Neuroscience**  
**MWF 10:10 – 11:00 AM, Psychology Building 111**  
**Fall 2017**

**Instructor:** Catherine Mewborn, M.S.                      **Teaching Assistant:** Emily Hallowell, M.A.  
**E-mail:** cmewborn@uga.edu and emily.hallowell@uga.edu  
**Office:** Psychology Building 113 (Catherine) and Psychology Building 124 (Emily)  
**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.*

**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) And, 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 Textbook:** 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.

**Examinations and Assignments:**

*Exams:* There will be four non-cumulative, multiple-choice exams throughout the semester. 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:* 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 title page and reference list and should be written 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, November 17.**

*Reading/Lecture Questions:* Reading/lecture questions are opportunities for you to communicate with the instructor(s) that you did not understand a point that was made in the lectures and/or your assigned reading. Questions will be due prior to the last lecture day for each chapter. See the course schedule below for tentative due dates, keeping in mind that the dates may be subject to change due to changes in the course schedule.

Reading/lecture questions should take the form of the “muddiest point.” The “muddiest point” is a point made in the lecture or reading assignment that you do not understand (i.e., your understanding is “muddy”). You are to write a few sentences stating the point in question and discussing what you do and do not understand about the point. Example: (1) “The muddiest point of the reading (or lecture) was ...,” (2) “What I understood about the point was ...,” and (3) “What I did not understand about the point was ...” or “My question about the point is...” You must ask **at least one**, but may ask more than one, reading/lecture question per assignment. There will be 13 reading/lecture question assignments total. While there are 14 chapters in the required textbook, you are allowed **one** “freebie” where do you not submit a reading/lecture question for that chapter. **Reading/lecture questions MUST be emailed to the instructor (Catherine, ‘cc Emily) by 5:00 PM on the day prior to the last lecture day for each chapter to receive credit.** If you are using your “freebie,” you must still email by 5:00 PM on the due date to let the instructor know you are using your “freebie.”

*Class Participation:* A portion of the student’s grade will be based on regular active participation within the classroom. 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.

### **Grading:**

*The grading breakdown is as follows:*

Exam 1	20%
Exam 2	20%
Exam 3	20%
Exam 4	20%
Paper	10%
Reading/Lectures Questions	5%
Class Participation	5%

*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 the information covered from one of your classmates. The instructor and TA will not re-teach you material covered during missed classes, nor will we provide you with lecture notes. Additionally, promptness, preparedness, and participation in class **WILL** be considered for the final grade (see Class Participation, above). There is no other way to earn these participation points besides attending class.

Even though attendance is not mandatory, the instructor(s) will keep a record of attendance and participation. A good attendance record will be useful for students with borderline grades (e.g., 89%, 79%, 69%). Thus, if a student has obtained a borderline final grade, we will use attendance as a way of deciding that person's letter grade for the class (i.e., an excellent attendance record will likely result in the higher grade).

**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. 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.

**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](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.

<b><i>Date</i></b>	<b><i>Day of week</i></b>	<b><i>Topic</i></b>
8/14	Monday	Syllabus and introductions
8/16	Wednesday	Chapter 1: A Brief History of Cognitive Neuroscience <b>Email reading/lecture questions by: 5 PM on 8/15</b>
/18	Friday	Chapter 2: Structure and Function of the Nervous System <b>LAST DAY OF DROP/ADD</b>
8/21	Monday	Chapter 2: Structure and Function of the Nervous System
8/23	Wednesday	Chapter 2: Structure and Function of the Nervous System <b>Email reading/lecture questions by: 5 PM on 8/22</b>
8/25	Friday	Chapter 3: Methods of Cognitive Neuroscience
8/28	Monday	Chapter 3: Methods of Cognitive Neuroscience
8/30	Wednesday	Chapter 3: Methods of Cognitive Neuroscience <b>Email reading/lecture questions by: 5 PM on 8/29</b>
9/1	Friday	Chapter 4: Hemispheric Specialization
9/4	Monday	<b>LABOR DAY – NO CLASS</b>
9/6	Wednesday	Chapter 4: Hemispheric Specialization <b>Email reading/lecture questions by: 5 PM on 9/5</b>
9/8	Friday	In-class review for Exam 1
9/11	Monday	<b>EXAM 1</b>
9/13	Wednesday	Chapter 5: Sensation and Perception <b>Discuss paper guidelines</b>
9/15	Friday	Chapter 5: Sensation and Perception
9/18	Monday	Chapter 5: Sensation and Perception <b>Email reading/lecture questions by: 5 PM on 9/17</b>
9/20	Wednesday	Chapter 6: Object Recognition
9/22	Friday	Chapter 6: Object Recognition <b>Email reading/lecture questions by: 5 PM on 9/22</b>
9/25	Monday	Chapter 7: Attention

9/27	Wednesday	Chapter 7: Attention
9/29	Friday	Chapter 7: Attention <b>Email reading/lecture questions by: 5 PM on 9/28</b>
10/2	Monday	Chapter 8: Action
10/4	Wednesday	Chapter 8: Action
10/6	Friday	Chapter 8: Action <b>Email reading/lecture questions by: 5 PM on 10/5</b>
10/9	Monday	In-class review for Exam 2
10/11	Wednesday	<b>EXAM 2</b>
10/13	Friday	Chapter 9: Memory
10/16	Monday	Chapter 9: Memory
10/18	Wednesday	Chapter 9: Memory <b>Email reading/lecture questions by: 5 PM on 10/17</b>
10/19	Thursday	<b>WITHDRAWAL DEADLINE</b>
10/20	Friday	Chapter 10: Emotion
10/23	Monday	Chapter 10: Emotion
10/25	Wednesday	Chapter 10: Emotion <b>Email reading/lecture questions by: 5 PM on 10/24</b>
10/27	Friday	<b>FALL BREAK – NO CLASS</b>
10/30	Monday	Chapter 11: Language
11/1	Wednesday	Chapter 11: Language
11/3	Friday	Chapter 11: Language <b>Email reading/lecture questions by: 5 PM on 11/2</b>
11/6	Monday	In-class review for exam
11/8	Wednesday	<b>EXAM 3</b>
11/10	Friday	Chapter 12: Cognitive Control
11/13	Monday	Chapter 12: Cognitive Control
11/15	Wednesday	Chapter 12: Cognitive Control <b>Email reading/lecture questions by: 5 PM on 11/14</b>
11/17	Friday	Chapter 13: Social Cognition <b>PAPER DUE at the beginning of class</b>
11/20	Monday	<b>THANKSGIVING BREAK – NO CLASS</b>
11/22	Wednesday	<b>THANKSGIVING BREAK – NO CLASS</b>
11/24	Friday	<b>THANKSGIVING BREAK – NO CLASS</b>
11/27	Monday	Chapter 13: Social Cognition <b>Email reading/lecture questions by: 5 PM on 11/26</b>
11/29	Wednesday	Chapter 14: Consciousness, Free Will, and the Law
12/1	Friday	Chapter 14: Consciousness, Free Will, and the Law
12/4	Monday	Chapter 14: Consciousness, Free Will, and the Law <b>Email reading/lecture questions by: 5 PM on 12/3</b>
12/5	Tuesday	In-class review for exam
12/6	Wednesday	<b>READING DAY</b>
12/13	Wednesday	<b>EXAM 4</b> Will take place during “final exam” timeslot: 8:00 – 11:00 AM