Attention!

This is a representative syllabus. The syllabus for the course when you enroll may be different. Use the syllabus provided by your instructor for the most up-to-date information. Please refer to your instructor for more information for the specific requirements of a given semester.

Course Readings:

Additional readings from the primary research literature will be provided on Carmen.

Course Description: Cognitive Neuroscience is a rapidly expanding scientific discipline that probes classical questions of human cognitive psychology via a broad array of cutting-edge methodological approaches, which include but are not limited to brain imaging (e.g., functional MRI and electroencephalography), lesion studies, single-cell recording, and examinations of brain injuries and other neurological disorders. This course will survey the results of these approaches, which have thus far generated fundamental insights about perception, object recognition, attention, memory, and many other cognitive processes.

Enrollment Requirements and Information:
1. 1100 (100) or 1100H (100H). Not open to students with credit for 513.
2. Please note that the major requirement fulfilled by this course was changed in 201

Tasks:
Exams (72%): There will three exams, including two midterms (each 22% of the final grade) and a final (28% of the final grade). The final exam will be cumulative. Each of these exams will be comprised of multiple choice questions.

Online Discussion (8%): We will spend a portion of 4 lectures in class going over articles from the primary research literature (each are listed in the syllabus). These articles will sometimes be challenging, and I have learned that discussion greatly facilitates comprehension. While our class is too large to hold discussions for which everyone can participate during class time, online discussions can be quite valuable. Therefore, we will activate the discussion board for our class on Carmen. The format for
these discussions is very informal, and all I ask is that each student participates to some extent. You must post at least one substantive question or comment in these discussion groups prior to the class meeting listed in the syllabus. The cutoff time is 1:00 PM on the day of the class meeting. Note that this is one hour and twenty minutes prior to class time, so that I have time to read the discussion. Substantive participation in each discussion will earn you 2% per article discussed.

**Reaction papers (10%)**: You will be asked to submit reaction papers to articles of your choosing that are listed in the syllabus (not to chapters of the textbook). In total, there are 4 articles throughout the semester. You may submit reaction papers to each of the 4 articles, but only your top 2 scores will be recorded for the final grade. These papers should be 1-2 pages (double-spaced), and they should: 1) summarize the article, 2) describe potential drawbacks, 3) provide recommendations for how to address the criticisms you have raised. Reaction papers must be uploaded to Carmen (specific instructions will follow) before they are discussed in class at 2:20 PM (note that this is our class time). No exceptions!

**Quizzes (10%)**: Before covering each of the 4 articles during class time, brief multiple choice quizzes will be administered. The goal of these quizzes is to test your basic knowledge of the article. Really, these quizzes are designed so that you can score highly if you made a good effort to read the article and follow the discussions on Carmen, even if you didn’t understand the finer details. Focus on the following questions if you want to do well: 1) what was the general question the authors attempted to address? 2) what cognitive neuroscience technique did they use? 3) roughly how many participants were included in the study? 4) how many experiments were there? 5) what kind of task did the participants have to do? 6) what general conclusions did the authors reach? Participation in the online discussion will greatly enhance your ability to perform well on the quizzes.

As a note: Ultimately, the exams will ask deeper questions about the articles. We’ll prepare for these questions when I cover the articles during class time. Following each class in which and article is covered, we will produce a list of 4-5 “What We Learned” (WWL) points from the article. These WWL points will be posted on Carmen and will form the basis for the exam questions on the articles.

**Course grades will be determined as follows (to two decimal places):**

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<tr>
<th>Percentage Range</th>
<th>Grade</th>
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<tbody>
<tr>
<td>93-100%</td>
<td>A</td>
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<tr>
<td>90-92.99%</td>
<td>A-</td>
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<tr>
<td>87-89.99%</td>
<td>B+</td>
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<tr>
<td>83-86.99%</td>
<td>B</td>
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<tr>
<td>80-82.99%</td>
<td>B-</td>
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<tr>
<td>77-79.99%</td>
<td>C+</td>
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<tr>
<td>73-76.99%</td>
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<tr>
<td>70-72.99%</td>
<td>C-</td>
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<tr>
<td>67-69.99%</td>
<td>D+</td>
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<tr>
<td>63-66.99%</td>
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<td>60-62.99%</td>
<td>D-</td>
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<td>&lt;59.99%</td>
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**Class attendance policy:**
Attendance is not mandatory. However, people who come to class do better. Many of the slides lack details describing the experiments in depth – and this information is vital to answering exam questions correctly.

**Academic Integrity:**

**CHEATING AND PLAGIARISM WILL NOT BE TOLERATED AND WILL RESULT IN FAILURE OF THE COURSE AND WILL BE REPORTED TO THE COMMITTEE ON ACADEMIC MISCONDUCT. IGNORANCE IS NOT AN EXCUSE!**

“It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term “academic misconduct” includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct [http://studentlife.osu.edu/pdfs/csc_12-31-07.pdf](http://studentlife.osu.edu/pdfs/csc_12-31-07.pdf)”

Please be aware that every assignment you turn in on Carmen will be compared via advanced software to a vast database of past assignments and those of your current peers. If you plagiarize, the detection software will alert us! See example from Class 1 lecture slides.

**Missed Classes:**

If you miss a class, please contact fellow students for relevant notes and handouts. The instructor or course assistants are available to meet with you after you have reviewed the notes and readings to answer additional questions. It will help to get the contact info of some fellow students.

**Accommodation:**

Students with disabilities that have been certified by the Office of Disability Services will be appropriately accommodated and should inform the instructor as soon as possible of their needs. The Office for Disability Services is located in 150 Pomerene Hall, 1760 Neil Avenue; telephone 292-3307, TDD 292-0901; [http://www.ods.ohio-state.edu/](http://www.ods.ohio-state.edu/)

**Cell Phones and Electronic Devices in Class:**

An increasing amount of research has pointed to negative cognitive effects of excessive electronic device use, something that will likely come up in class. Many of us find it hard to resist texting or even surfing the web during class. And there is evidence that it dramatically worsens performance for you and your neighbors (see lecture slides from Class 1).

With all of this in mind, I have established the following policies:

1. If you bring a laptop to class, it can be used only to take notes. Do not use it for web surfing or engaging in social media. Students found to be surfing the web or
otherwise using their computers in a manner that is distracting to their classmates will be asked to close their laptops. If a student continues this inappropriate laptop use, he/she will be asked to leave the classroom.

2. If students need to text or make a phone call, they are required to first excuse themselves from the classroom.

**Policy on Democratic Learning Environment:**

I believe that academic systems work best when they serve the needs of the students. As such, there will be some occasions where we will vote to make minor changes to the syllabus, such as dedicating class time to review for an exam, modifying the submission times for quizzes and reaction papers, or frequency of email alerts from professor to students. The goal of this process is to ensure that the majority of the class is satisfied with the course structure. If a modification to the syllabus is made, a new syllabus will be posted on that day, and it will be announced during the course announcements period of the following class.

**Class Schedule (subject to change):**

**Week 1:**
Tuesday, 1/12: First day of class. Welcome/introduction/syllabus
Thursday, 1/14: History of Cognitive Neuroscience
*Chapter 1: A Brief History of Cognitive Neuroscience*

**Week 2:**
Tuesday, 1/19: Neuroanatomy
Thursday, 1/21: Neuroanatomy (cont.)
*Chapter 2: Structure and Function of the Nervous System*

**Week 3:**
Tuesday, 1/26: Cognitive Neuroscience Methods
Thursday, 1/28: Cognitive Neuroscience Methods (cont.)
*Chapter 3: Methods of Cognitive Neuroscience*

**Week 4:**
Tuesday, 2/2: Class discussion of Methods in Cognitive Neuroscience: McCabe & Castel (2008). Response papers for the McCabe article must be turned in no later than today.
Thursday, 2/4: Sensation and Perception
*Chapter 5: Sensation and Perception*

**Week 5:**
Tuesday, 2/9: Sensation and Perception (cont.)
Thursday, 2/11: Object Processing
*Chapter 6: Object Recognition*

**Week 6:**
Tuesday, 2/16: Object Processing (cont.)
Thursday, 2/18: **Class Discussion of Object Processing: Kanwisher et al. (1997).**

*Response papers for the Kanwisher article must be turned in no later than today.*

**Chapter 6: Object Recognition**


**Week 7:**
Tuesday, 2/23: Exam 1
Thursday, 2/25: Hemispheric Specialization

**Chapter 4: Hemispheric Specialization**

**Week 8:**
Tuesday, 3/1: Action
Thursday, 3/3: Action (cont.)

**Chapter 8: Action**

**Week 9:**
Tuesday, 3/8: Learning and Memory
Thursday, 3/10: Learning and Memory (cont.)

**Chapter 9: Memory**

**Week 10:**
Tuesday, 3/15: NO CLASS: SPRING BREAK
Thursday, 3/17: NO CLASS: SPRING BREAK


**Week 11:**
Tuesday, 3/22: **Class Discussion of Emotion: Greene et al. (2001).** *Response papers for the Greene article must be turned in no later than today.*

Thursday, 3/24: Emotion (cont.) / Language

**Chapter 10: Emotion**

**Chapter 11: Language**

**Week 12:**
Tuesday, 3/29: Language (cont.)
Thursday, 3/31: Exam 2

**Week 13:**
Tuesday, 4/5: Attention
Thursday, 4/7: Attention (cont.)

**Chapter 7: Attention**

**Week 14:**
Tuesday, 4/12: **Class Discussion of Attention: O’Craven et al., (1997).** *Response
papers for the O’Craven article must be turned in no later than today.
Thursday, 4/14: Cognitive Control (cont.)

Chapter 12: Cognitive Control

Week 15:
Tuesday, 4/19: Social Cognition
Thursday, 4/21: Consciousness, Free Will, and the Law

Chapter 13: Social Cognition
Chapter 14: Consciousness, Free Will, and the Law

Cumulative Final Exam: Wednesday, April 27th, 2:00pm-3:45pm
This cannot be rescheduled.