

Cognitive Neuroscience
3 credits
Prerequisites: Grade of C or better in PSCH 242

Semester: Spring 2016

Instructor: Dr. Jamie Donahey Roitman
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Course number: PSCH 366
Class time: T,R – 12:30 – 1:45pm
Class location: D1 LCD

TA: Sineadh Conway
Office hours: by appointment
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Course Description, Goals, and Objectives

In this class, we will learn how brain activity underlies such 'higher' mental functions as attention, learning, memory, language, and decision-making. We will critically evaluate different techniques used to measure the brain activity during cognitive processing with an eye towards understanding how different methods provide complementary information to help us understand the brain, as well as their limitations. By the end of this course, I hope that you will have a working knowledge of cognitive neuroscience that would be sufficient to explain to a friend or family member why some people hear colors, how the limits of our attention networks make it dangerous to text and drive, and why there are different types of memory impairments. We will also focus on becoming critical consumers of information from the popular media.

COURSE MATERIALS

Required Text

Cognitive Neuroscience: The Biology of the Mind (Fourth edition). Gazzaniga, Ivry & Mangun. Norton & Company.

Previous editions of the text are not organized in the same manner as the fourth, and they do not include chapters on Social Neuroscience and Consciousness, Free Will and the Law. If you choose to purchase a different edition, it will be your responsibility to determine which chapters correspond to the material covered in class.

COURSE POLICIES

Attendance Policy

Research shows that students who attend class are more likely to be successful. You are responsible for all material discussed in lecture. Lectures both emphasize the most relevant information from the text and feature data from the primary literature *not* included in the text. All material that is presented in class, whether or not it is also in the book, may appear on exams. Attendance is critical for success.

Electronic devices are a distraction to me and to the students sitting near you during class. As you will learn in this course, attention and working memory are limited-capacity cognitive processes. Time in class is most useful if you are focused on the material we are discussing,

therefore the use of electronic devices for texting, social media, shopping, playing games, entertainment, etc. is not permitted in my class. If your devices are a distraction, I will ask you to either turn it off or leave the room for the benefit of the class as a whole.

Policy for Missed or Late Work

There is one writing assignment in this course, which you will submit via Blackboard. We will not accept email to me or the TAs. No hard copy is required. If you submit your essay at any time after the deadline, your essay grade will be reduced by 10% for each day late, beginning at the time that the assignment is due.

Electronic Communication

Blackboard is an integral tool for communication for this course. Announcements will be available on Blackboard, and I highly recommend that you adjust your settings to receive notice of announcements by email. Lecture slides will be posted before class, and grades will be posted as soon as they are available.

I am happy to communicate with you by email, and this is often the most reliable way to reach me. You should be sure to identify yourself as a student in Psch 366. In general, people born before 1982 will take your message more seriously if you use proper spelling, punctuation, and grammar. I will typically be able to respond to emails within two workdays and will not respond to "ASAP" requests. These suggestions may seem superficial, but communicating in a professional manner with those who are teaching (mentoring, advising, or employing) you will make a good impression and are an essential part of your ongoing professional development.

Academic Integrity Policy

It is my hope that each student learns the material and succeeds. Academic dishonesty of any form including plagiarism (<http://www.uic.edu/depts/engl/phd/FYWP/PlagiarismPolicy.pdf>) will not be tolerated. Evidence of cheating on any graded material will be dealt with through the Judicial Liaison Process, and will result in a '0' being entered as the grade for the exam or essay. Further consequences could include failure of the course, disciplinary probation, suspension, dismissal or expulsion.

A student who submits work, *at any stage of the writing process*, which in whole or part has been written by someone else or which contains passages quoted or paraphrased from another's work without acknowledgment (quotation marks, citation, etc.) has plagiarized. Maintain your integrity when completing assignments and be overzealous to give credit where it is due. If you are ever unsure about what constitutes plagiarism, ask me. Students who are found to have plagiarized work may be subject to various disciplinary actions, including a failing grade on a particular assignment, failure of the entire course, and possible expulsion from the university. In cases of academic dishonesty, my policy is to file a complaint with the Office of the Dean of Students. For more information about violating academic integrity and its consequences, consult the website of the UIC Office of the Dean of Students at <http://www.uic.edu/depts/dos/studentconduct.html>.

RELIGIOUS HOLIDAYS

<http://oae.uic.edu/docs/ReligiousHolidaysFY20152017.pdf>

ACADEMIC DEADLINES

<http://grad.uic.edu/cms/?pid=1000222>

DISABILITY ACCOMMODATION

Accommodations are available for students who have disabilities. Please notify me during the first week of class of any accommodation needed for the course. Students with disabilities who require accommodations for access and participation in this course must be registered with the Disabilities Resource Center (http://www.uic.edu/depts/oaad/disability_resources/index.html). Disabilities may arise due to unanticipated medical emergencies or other traumatic events. In the case of such a situation, please contact the DRC at the time when the problem occurs, so that a counselor can determine whether any accommodations are needed.

COURSE REQUIREMENTS, METHODS OF EVALUATION, & GRADING POLICIES

You will be evaluated based on three exams during the semester, a short essay, and a final exam. All exams must be completed during the class period. Exams will consist of multiple choice and short answer questions. Your grade will be based on the essay and your top three exam scores. Therefore, there will be no make-up exams. You should contact me **promptly** for advice if you are not performing as well as you want for advice on how to improve your performance.

Your grade will be based on:

Three exams: 50 points each

Essay: 50 points

- 4-5 pages, assessing a popular press report of a recent research finding

Cumulative final exam: 50 points

The distribution of grades will be:

A: 170-200 points

B: 150-169

C: 130-149

D: 110-129

F: 0 – 109

HOW TO INTERPRET MIDTERM GRADES

http://tigger.uic.edu/depts/oaad/advising/student_midterm.html

TENTATIVE CALENDAR OF MAJOR COURSE EVENTS AND DEADLINES

Week	Day	Date	Topic	Chapter
1	T	1/12	Overview of cognitive neuroscience	1
	R	1/14	Cellular mechanisms and cognition	2
2	T	1/19	Cellular mechanisms and cognition	2
	R	1/21	Neuroanatomy	2
3	T	1/26	Neuroanatomy/development	2
	R	1/28	Methods of cognitive neuroscience	3
4	T	2/2	Methods of cognitive neuroscience	3
	R	2/4	Sensation and perception	5
5	T	2/9	Exam 1	
	R	2/11	Sensation and perception	5
6	T	2/16	Sensation and perception	5
	R	2/18	Object recognition	6
7	T	2/23	Attention	7
	R	2/25	Attention	7
8	T	3/1	Memory systems	9
	R	3/3	Memory systems	9
9	T	3/8	Emotion	10
	R	3/10	Language	11
10	T	3/15	Exam 2	
	R	3/17	Language	11
	T	3/22	<i>Spring Break – no class</i>	-
	R	3/24	<i>Spring Break – no class</i>	-
11	T	3/29	Hemispheric specialization	4
	R	3/31	Hemispheric specialization	4
12	T	4/5	Cognitive control	12
	R	4/7	Cognitive control	12
13	T	4/12	Cognitive control; Essay Due	12
	R	4/14	Social cognition	13
14	T	4/19	Social cognition	13
	R	4/21	Consciousness, Free Will and the Law	14
15	T	4/26	Consciousness, Free Will and the Law	14
	R	4/28	Exam 3	
<i>Finals</i>	<i>TBA</i>	<i>TBA</i>	Final exam	

UIC RESOURCES

If you find yourself having difficulty with the course material or any other difficulties in your student life, don't hesitate to ask for help! Come to me, or if it is about an issue beyond this class, please contact your college advisors, or get help from any number of other support services on campus. You can get a referral to the right place, or help on the spot, from concerned advisor in the Undergraduate Success Center (USC) at usc@uic.edu.

The Writing Center, located in Grant Hall 105, offers one-on-one consultation with student writers who need help developing ideas, or need advice, guidance or additional instruction on any aspects of writing in any class. Tutors are prepared to spend fifty minutes per appointment, and there is no limit to the number of tutoring sessions you can have each semester. Make an

appointment and be on time! Bring the paper on which you're working, as well as any related drafts or notes, and information about the assignment. For an appointment, call the Writing Center at (312) 413-2206, or stop by room 105 of Grant Hall. Visit the Writing Center website at www.uic.edu/depts/engl/writing for more information.

Public Computer Labs are available throughout campus where you may write and/or print out your work. For a list of labs and the hours they're open, go to <www.accc.uic.edu/pclabs>.

The Academic Center for Excellence can help if you feel you need more individualized instruction in reading and/or writing, study skills, time management, etc. Phone: (312) 413-0031.

Counseling Services are available for all UIC students. You may seek free and confidential services from the Counseling Center <www.counseling.uic.edu>. The Counseling Center is located in the Student Services Building; you may contact them at (312) 996-3490. In addition to offering counseling services, the Counseling Center also operates the InTouch Crisis Hotline from 6:00 p.m.-10:30 p.m. They offer support and referrals to callers, as well as telephone crisis interventions; please call (312) 996-5535.