

Psychology 320: Cognitive Neuroscience
Fall 2008

Instructor:	Dr. Sarah Johnson	When:	T/R 8:50-10:00am
Phone:	610-625-7013	Where:	235 PPHAC
Office:	224 PPHAC	Office hours:	M 2-3:30pm
Email:	skjohnson@moravian.edu		W 9-10am
Website:	http://blackboard.moravian.edu/		R 1-2pm, or by appt.
	Pwd: cogneuro		

Main Course Objective: We will learn about how the brain serves as the source for what researchers consider “higher function” (e.g., language, planning, complex aspects of perception and memory, social behavior, etc.). There will be an emphasis on looking at first hand research, particularly involving patients and neuroimaging techniques.

Specific Course Objectives:

1. Discuss important theories and findings from cognitive neuroscience, including knowing some of the important researchers in these areas, paradigms employed, and learning the locations and functions of distinct neuroanatomical regions.
2. Understand the bases of neuroscience methodologies, with an emphasis on strengths and weaknesses of each and how they can be used in coordination with other types of research to offer *converging evidence*.
3. Look at how information from the domain of cognitive neuroscience is portrayed in public forums and develop a critical eye toward such information, developing/enhancing your skills at determining credible versus questionable depictions of such information.

Textbook: *Cognitive Neuroscience: The Biology of the Mind*, 3rd ed., by Gazzaniga, Ivry, & Mangun. Additional readings will be journal articles, in conjunction with written assignments and the poster project. Suggested: *A Colorful Introduction to the Anatomy of the Human Brain*, by Pinel (can be borrowed from me to make copies of select portions).

Attendance: Attending class will benefit you for multiple reasons: learning how to learn and think critically, discussion of specific tips for learning particular material, participation in activities designed to promote active learning and integration of info, gaining a better idea of my expectations for assignments or exams. With that said, I hold a liberal attendance policy for this class. You will be given **up to 3 allowed absences**, and starting with the fourth absence, your final grade will be reduced by 4% for each additional absence—exceptions may be made in cases of extreme emergency, as determined by me on a case by case basis. Apart from this policy, there are some days on which attendance is required (e.g., Poster days). In addition, I reserve the right to adjust a final grade upwards based on a high quality of participation, as follows:

A student who arrives on time and prepared for every class, participates in discussion frequently, but without overly dominating, is highly active in all class activities, and who generally contributes high quality ideas during class, may receive a boost of 1/3rd letter grade to his/her final course grade. This adjustment will be given infrequently, denoting the highest possible quality of participation.

Lateness: A legitimate reason for being late can happen to anyone now and then, but repeated lateness is disrespectful to me and to your classmates. Come see me if you have a legitimate reason for repeated lateness or absence.

Course Evaluation: Grades will be based on written assignments, a poster project, and exams.

1. Assignments: There will be three short written assignments. Two of these will reflect material being covered in class at the time. The other two will be “Neuroscience in the Public Eye” write-ups and can be turned in at essentially any point during the semester. These assignments will be described in separate handouts. Each one is worth 5% of your final grade.

2. Exams: There will be three exams during the course of the semester, and a fourth exam given during finals period. The top three exam grades will be kept (each worth 15% toward your final grade). The format of the exams will be a combination of multiple choice, diagram identification, short answer, and essay. Exams can include questions on the assigned text chapters, handouts, and readings, even if not discussed in lecture. Study guides will be posted on Blackboard as each exam approaches and will include important terms to know for the exam as well as sample exam questions.

Missed exams: If you miss an exam and have a *legitimate, documentable* excuse, you can schedule a makeup exam. If your excuse is due to a reason that could not be foreseen, I expect you to contact me *as soon as possible* after the exam. If you know in advance that you will be absent during an exam (e.g., because of travel for a sports team or an interview) then you need to let me know as soon as possible before the exam. You may not take a make-up exam if you skipped the exam without legitimate reason for absence.

3. Short papers: You will be required to turn in two short papers (~3-4 pages) that integrate two articles’ findings from a particular domain in cognitive neuroscience. There will be six opportunities for you to complete a short paper, and you may choose (within certain guidelines) which of the topics you would like to research. Deadlines for the specific topics are given on the schedule at the end of the syllabus, and the expectations for these papers will be described in a separate handout.

4. Converging Evidence Project: There will be a poster/paper project at the end of the term. The poster part of the project will be conducted in pairs and will be shared during the final two class periods of the term. The paper part of the project will be written independently. More information about this project will be given in a separate handout.

Late policy for assignments: Late assignments and papers will be accepted for up to four days after the due date and, unless otherwise noted, will be *penalized one letter grade for every calendar day late* beginning at the specified time on the due date. After the 4-day period, a paper will not be accepted and a grade of 0 will be applied. No exceptions will be made for minor technical difficulties (printer or email mishaps), but other circumstances may allow for exceptions as determined by me on a case-by-case basis.

Note that it is within my purview to use qualitative judgment in assigning grades for various components of the course (e.g., homework assignments, exam essays, papers, etc.).

Overall grades- breakdown:

Assignments (3 @ 5% each)	15%
Exams (3 @ 15% each)	45%
Short papers (2 @ 10%)	20%
Poster/Papers	20%
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Total	100%

Unless otherwise noted, I will use the following scale for calculating grades:

Letter	Score	Grade range	Letter	Score	Grade range
A	100	95-100	C	75	73-76
A-	92	90-94	C-	71	70-72
B+	88	87-89	D+	68	67-69
B	85	83-86	D	65	63-66
B-	81	80-82	D-	61	60-62
C+	78	77-79	F	0	0-59

Plagiarism and cheating: Any work that you turn in for this class must be entirely your own work. Any sources used must be properly documented, and I will ask you not to use any direct quotes in assignments or papers. For more information on plagiarism and cheating, refer to the Student Handbook and the following website regarding academic responsibility at Moravian College: <http://www.moravian.edu/studentLife/handbook/academic2.htm>. As this site clearly explains, the consequences for cheating or plagiarism can range from failing the assignment to receiving an F for the final course grade to expulsion, depending on the severity of the case and prior history of offenses. Although I am not generally opposed to your discussing assignments with fellow students from the class, all of the work you submit to me must be entirely your own, except where explicitly noted that collaboration is allowed or expected.

I will spend class time discussing ways to avoid plagiarizing, but apart from this it is your responsibility to come see me if you have any questions about your use of sources or when/in what way it is okay to collaborate with other students in the class.

Disabilities: The Americans with Disabilities Act (ADA) provides for some accommodations to be made for students with certain disabilities. If you have such a disability and are willing to disclose it, you may take advantage of such accommodations. In order to do so, you are required to meet with Mr. Joseph Kempfer in the Office of Learning Services. Accommodations cannot be provided until I have received authorization from Mr. Kempfer. You should also consider taking advantage of the Learning Services Office if you are having difficulty academically in this (or any other) class. The office is located at 1307 Main St. (phone: 610-861-1510).

Extra credit: Extra credit opportunities will be made available partway through the semester. However, do come and see me at any point during the semester if you feel you could be doing better than you are. We can work together to improve your performance.

Ultimately it is your responsibility to come and see me if you have any questions/concerns about class or about your performance. I'm always happy to meet with students, so please drop on by!

Class Schedule (This schedule is tentative. I reserve the right to make announced changes.):

Week:	Class topic/activities:	Text Chs/Assignments:
1		
	Aug 26 T Introduction and course overview	
	Aug 28 R History of cognitive neuroscience	Ch. 1
2		
	Sept 2 T Neurons: structure and function	(Use Ch. 2 following lecture to reinforce key concepts)
	Sept 4 R Neurons cont'd	
3		
	Sept 9 T Neuroanatomy	Ch. 3 (pp. 59-87)
	Sept 11 R Development and plasticity	Ch. 3 (pp. 88-108)
4		
	Sept 16 T Neuroscience methodology: Cognitive and computational methods	Ch. 4 (pp. 110-120)
	Sept 18 R Neuroscience methodology: Neurological methods	Ch. 4 (pp. 120-160); Wise article
5		
	Sept 23 T Exam 1	
	Sept 25 R Visual perception	Ch. 5 (pp. 177-206)
6		
	Sept 30 T Perception cont'd	Synesthesia article (Palmeri et al.)
	Oct 2 R Object recognition	Ch. 6
7		
	Oct 7 T NO CLASS – Fall Break	
	Oct 9 R Object recognition cont'd	<i>Five senses assignment</i>
8		
	Oct 14 T Attention and consciousness	Ch. 12
	Oct 16 R	Short paper 1 (Object recognition)
9		
	Oct 21 T Exam 2	
	Oct 23 R Learning and memory	Ch. 8

Week:	Class topic/activities:	Text Chs/Assignments:
10		
	Oct 28 T	Short paper 2 (Attention/neglect)
	Oct 30 R	Cognitive control Ch. 13
11		
	Nov 4 T	Problem-solving article (Kounios et al.); Short paper 3 (Memory)
	Nov 6 R	Language Ch. 10
12		
	Nov 11 T	Short paper 4 (Cognitive control)
	Nov 13 R	Exam 3
13		
	Nov 18 T	Emotion Ch. 9
	Nov 20 R	Short paper 5 (Language)
14		
	Nov 25 T	Social cognition Ch. 14
	Nov 27 R	NO CLASS – Thanksgiving Break
15		
	Dec 2 T	Converging Evidence Paper
	Dec 4 R	Posters
16		
	Dec 9 T	Posters Short paper 6 (Emotion/social; due Wed)

Finals Wk **Exam 4** (schedule TBA)

Exam 1 – Chs. 1, 3-4

Exam 2 – Chs. 5-6, 12

Exam 3 – Chs. 8, 10, 13

Exam 4 – Chs. 9, 14, and main points from Posters