

Honors Discussion Section for Psychology 414
Cognitive Psychology
Fall 2019

Course Goal: To develop an appreciation for what we know about human cognition (content), how we acquire this knowledge (methodology), and how to evaluate it (critical thinking). The course will emphasize three themes:

1. Developing an understanding of the neural bases of the cognitive system cannot proceed without detailed understanding of theories and models of cognition;
2. In-depth understanding of the methods of cognitive neuroscience is essential if we are to discriminate between good experiments and poor experiments;
3. Effective communication skills are critical to the scientific endeavor.

Learning Outcomes:

Upon satisfactory completion of this course, students will be able to:

- understand the neurophysiological mechanisms underlying important domains of cognition: perception, attention, motor control, episodic long-term memory, semantic long-term memory, working memory, cognitive control, and decision making;
- describe the biological, physiological, neurochemical, and physics bases for methodologies that are important for cognitive neuroscience research: EEG; MEG; fMRI; tACS; tDCS; TMS;
- understand the important constraints on design of experiments using these methods, and on interpretation of data produced by these methods;
- understand the core principles proposed by three prominent theories of consciousness: Global Workspace Theory; Recurrent Processing Theory; Integrated Information Theory.

Instructor: Brad Postle, 515 Psychology, 262-4330, postle@wisc.edu
Office hours by appointment.

With the exception of time-sensitive emergencies, email is the most effective and preferred way for you to contact me.

Format: In this Honors discussion section for Psychology 414, we will explore in depth the *cognitive neuroscience* of the themes that we are addressing in that week's lectures. Weekly readings will be drawn from drafts of the 2nd edition of my textbook, *Essentials of Cognitive Neuroscience*, which was written expressly for this class. PDFs of each assigned chapter will be on the course's canvas site. To stimulate conversation (and for me to ensure that the readings are being done) each student will submit, via a "Discussion" on this section's canvas site, a question or comment prompted by that week's reading. *Each week, questions are due by 5pm on the Sunday before that class's meeting.* Subsequently, *between 5pm Sunday and 12 pm on Tuesday*, each student should respond to at least one other student's comment (e.g., by offering an answer to a question, commenting on how an aspect to that question was covered in a course previously taken or a book previously read, etc.)

Grading:

Participation in the Honors section should yield better understanding of the course's content in general and may help you to be more successful in the course overall. It is also my goal that participation in the Honors section will improve your capacity to speak with others about complicated topics, be aware of group dynamics, and give you practice facilitating discussions with other engaged and motivated members of the class. Satisfactory participation in the Honors component of the course, combined with a course grade of B or better, will result in earning Honors in the course.

If at any time during the semester you determine that you are not capable of fully participating in the Honors Discussion Section, speak with me as soon as possible. Through the first several weeks of class, it may be possible to administratively move you to the regular version of the course without harm to your course grade. If you remain enrolled in the Honors component of the course and *do not satisfactorily participate as described above, your grade in the course will be lowered by one entire grade*. For example, if you are on track to earn a B in the course based on the regular grading rubric and you remain enrolled in, but fail to fully participate in, the Honors discussion section, you will earn a C grade in the course.

So there's not really a grade that corresponds to an evaluation of the quality of your participation in this honors seminar, just an overall assessment of whether you were a conscientious and engaged participant. It might be helpful, however, for me to share the rubric that I use for classes for which I *do* assess a grade based on participation. (To be clear, I'm *not* explicitly applying this to an evaluation of your participation in this class, but it gives you a sense of what my expectations are in settings like this one.)

Guidelines for evaluating class participation:

Outstanding Contributor: Contributions in class reflect exceptional preparation. Ideas offered are always substantive, provide one or more major insights as well as direction for the class. Challenges are well substantiated and persuasively presented. If this person were not a member of the class, the quality of discussion would be diminished markedly. (Outstanding contributors will receive full credit = x points.)

Good Contributor: Contributions in class reflect thorough preparation. Ideas offered are usually substantive, provide good insights and sometimes direction for the class. Challenges are well substantiated and often persuasive. If this person were not a member of the class, the quality of discussion would be diminished. (Good contributors will receive x – y points.)

Adequate Contributor: Contributions in class reflect satisfactory preparation. Ideas offered are sometimes substantive, provide generally useful insights but seldom offer a new direction for the discussion. Challenges are sometimes presented, fairly well substantiated, and are sometimes persuasive. If this person were not a member of the class, the quality of discussion would be diminished somewhat. (Adequate contributors will receive x – z points.)

Non-Participant: This person says little or nothing in class. Hence, there is not an adequate basis for evaluation. If this person were not a member of the class, the quality of discussion would not be changed. (Non-participants will receive x – yy points.)

Unsatisfactory Contributor: Contributions in class reflect inadequate preparation. Ideas offered are seldom substantive, provide few if any insights and never a constructive direction for the class. Integrative comments and effective challenges are absent. If this person were not a member of the class, valuable air-time would be saved. (Unsatisfactory contributors will receive x – zz points.)

****This one is important for this class:** A student's class participation grade will be negatively impacted if the professor has the impression that the student has spent an excessive amount of class time engaged in activities unrelated to class (e.g., checking Facebook, sending emails, etc.).

Missing posting deadlines and class meetings: Per University policy, you have two weeks (i.e., until 9/19/19) to make arrangements with the professor about making up absences due to a conflict (e.g., if you know that you'll be missing class on a particular day due to a trip, a religious observance, etc.). I will not consider requests for make-ups or deadline extensions after 9/19/19 for conflicts that could have been predicted at the beginning of the semester. I am, of course, much more flexible regarding unforeseen circumstances, such as illness or a family emergency. (In cases of illness, you will be expected to send an email to the professor (postle@wisc.edu) on the day of the missed class meeting or, if that's not possible, to be able to supply reasonable documentation after the fact.)

Date	Topic	Reading (Postle , 2020)
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Section I: Perception and Attention

September 10	1. Historical foundations, primer on anatomy and physiology	Chpt. 1 and 2
September 17	2. Vision	Chpt 4 and 6
September 24	3. Spatial cognition and attention	Chpt 7
October 1	4. Oculomotor control and attentional control	Chpt 9

Section II: Representation and Memory

October 8	5. Visual object recognition and knowledge	Chpt 10
October 15	6. Neural bases of memory	Chpt. 11
October 22	7. Episodic long-term memory	Chpt. 12
<i>No class meeting – Society for Neuroscience annual conference</i>		
<i>**Online Discussion will happen as per normal**</i>		
October 29	Working Memory	Chpt. 14

Section III: High-Level Cognition, Cognitive Control, Communication, Consciousness

November 5	Cognitive control	Chpt. 15
November 12	Skeletomotor control	Chpt. 8
November 19	Decision Making	Chpt. 16
November 26	Language	Chpt. 19
December 3	Consciousness	Chpt. 20

Diversity and Inclusion:

Diversity is a source of strength, creativity, and innovation for UW-Madison. We value the contributions of each person and respect the profound ways their identity, culture, background, experience, status, abilities, and opinion enrich the university community. We commit ourselves to the pursuit of excellence in teaching, research, outreach, and diversity as inextricably linked goals.

The University of Wisconsin-Madison fulfills its public mission by creating a welcoming and inclusive community for people from every background – people who as students, faculty, and staff serve Wisconsin and the world. <https://diversity.wisc.edu/>

Ethics of Being a Student in the Department of Psychology:

The members of the faculty of the Department of Psychology at UW-Madison uphold the highest ethical standards of teaching and research. They expect their students to uphold the same standards of ethical conduct. By registering for this course, you are implicitly agreeing to conduct yourself with the utmost integrity throughout the semester.

In the Department of Psychology, acts of academic misconduct are taken very seriously. Such acts diminish the educational experience for all involved – students who commit the acts, classmates who would never consider engaging in such behaviors, and instructors. Academic misconduct includes, but is not limited to, cheating on assignments and exams, stealing exams, sabotaging the work of classmates, submitting fraudulent data, plagiarizing the work of classmates or published and/or online sources, acquiring previously written papers and submitting them (altered or unaltered) for course assignments, collaborating with classmates when such collaboration is not authorized, and assisting fellow students in acts of misconduct. Students who have knowledge that classmates have engaged in academic misconduct should report this to the instructor.

Complaints:

Occasionally, a student may have a complaint about a TA or course instructor. If that happens, you should feel free to discuss the matter directly with the TA or instructor. If the complaint is about the TA and you do not feel comfortable discussing it with him or her, you should discuss it with the course instructor. Complaints about mistakes in grading should be resolved with the TA and/or instructor in the great majority of cases. If the complaint is about the instructor (other than ordinary grading questions) and you do not feel comfortable discussing it with him or her, make an appointment to speak to the Associate Chair for Undergraduate Studies, Professor Maryellen MacDonald (mcmacdonald@wisc.edu).

If your complaint concerns sexual harassment, you may also take your complaint to Dr. Linnea Burk, Clinical Associate Professor and Director, Psychology Research and Training Clinic, Room 315 Psychology (262-9079; burk@wisc.edu).

If you have concerns about climate or bias in this class, or if you wish to report an incident of bias or hate that has occurred in class, you may contact the Chair of the Department, Professor Craig Berridge (berridge@wisc.edu) or the Chair of the Psychology Department Climate & Diversity Committee, Professor Martha Alibali (martha.alibali@wisc.edu). You may also use the University's bias incident reporting system, which you can reach at the following link: <https://doso.students.wisc.edu/services/bias-reporting-process/>.

Accommodations Policy:

The University of Wisconsin-Madison supports the right of all enrolled students to a full and equal educational opportunity. The Americans with Disabilities Act (ADA), Wisconsin State Statute (36.12), and UW-Madison policy (Faculty Document 1071) require that students with disabilities be reasonably accommodated in instruction and campus life. Reasonable accommodations for students with disabilities is a shared faculty and student responsibility. Students are expected to inform faculty [me] of their need for instructional accommodations by the end of the third week of the semester, or as soon as possible after a disability has been incurred or recognized. Faculty [I], will work either directly with the student [you] or in coordination with the McBurney Center to identify and provide reasonable instructional accommodations. Disability information, including instructional accommodations, as part of a student's educational record is confidential and protected under FERPA.