Psychology 505—Honors Section
Cognitive Neuroscience: Bridging Mind and Brain
Spring 2025

Course Goal and Overview: The goal of this course is to explore the principles and mechanisms whereby the organization and functioning of the nervous system give rise to behavior and cognition. In doing so, we will address many questions that are fundamental to the human condition, including: *How do our brains allow us to see, hear, feel, remember, know, think, decide, and act? What are the consequences for these abilities of injuries or diseases that compromise brain function? Can we "read people's minds" by measuring activity in their brains? Will we one day be able to build artificial brains? In what ways are artificial intelligence (AI) systems similar to human brains, in structure and in function? Can we enhance the abilities of our own brains? What is it about human brains that makes us different from other animals? Why do we sleep and dream?* Although many of these questions have a decidedly contemporary slant, at their core they address fundamental problems of human thought and awareness that have fascinated our species for at least as far back as there are records of what humans think about.

Today, we are lucky to be living in an era when, for the first time in human history, we have the tools for addressing these questions via precise measurements, and perturbations, of the brain "in action," often hand-in-hand with ever-more-sophisticated computer simulations. For the cognitive neuroscientist, these are heady times, as the seemingly daily progression of technological and analytic advancements allow us to study almost any question that we can conceive. For the student, it poses the sometimes daunting, but unavoidable, challenge of needing to understand enough of the physics, of the chemistry, and of the engineering on which the tools of modern cognitive neuroscience depend, as well as of the mathematics and of the statistics needed to analyze and interpret the data that these tools produce. As your tour guides on this journey, your professor and TAs take it as a top priority to make these aspects of the course as accessible and user-friendly as is practicable. As Honors students, all references to "TAs" actually refer to the professor, because he leads your Discussion section, grades all your written work, etc. (All content in this syllabus that appears in this blue font is specific to students enrolled in the Honors section.

Learning Outcomes: Upon satisfactory completion of this course, students will be able to:
• describe the anatomical structures associated with the following major classes of cognition: perception, attention, motor control, long-term memory, cognitive control, decision making, social cognition, and emotion;
• describe the following constructs and theoretical frameworks that illustrate influential principles in cognitive neuroscience: localization of function, distributed representation, Hebbian plasticity, feedforward vs. feedback signaling, reinforcement learning, drift-diffusion models, predictive coding, deep convolutional neural networks, dynamical systems theory, recurrent neural networks; representational geometry analysis; representational similarity analysis.
• describe the physical bases and engineering principles that are fundamental for the following techniques measuring or perturbing brain activity: transcranial magnetic stimulation (TMS), electroencephalography (EEG), extracellular electrophysiology, electrocorticography (ECoG), optogenetics, magnetic resonance imaging (MRI), functional (f)MRI;
• describe the most common methods for analyses of signals generated by EEG, extracellular electrophysiology, ECoG, and fMRI.
• describe the neural systems and mechanisms that are critical for the following domains of cognition: perception (visual, auditory, and somatosensory), spatial cognition, attention, skeletomotor control, oculomotor control, object recognition, long-term memory (declarative and nondeclarative), working memory, cognitive control, decision-making, social cognition, emotion.

• articulate, verbally and in writing, questions and ideas about how the brain gives rise to the mind at a level of sophistication that surpasses what would be expected from an 'educated layperson'.
• critically evaluate claims about cognitive neuroscience as they appear in the popular press
• compose questions that probe for nuanced conceptual understanding in novel didactic text focused on the very latest developments in cognitive neuroscience.

Instructor: Brad Postle, 515 Psychology, 608-262-4330, postle@wisc.edu
Office hours: Tues. 3:30-5, or by appointment (send an email indicating days and times when you would be available).

TA (Discussion sections 301, 302, 303): Jung Woo Hur; office: 165 Psychology; email: jhur9@wisc.edu.
Office hours: M 1:30-2:30; Thurs 1:30-2:30.

TA (Discussion sections 304, 305, 306): Nicole Stigler; office: 617 Psychology; email: nstigler@wisc.edu
Office hours: M. 1:30-2:30; T. 1:30-2:30.

Email is the most effective and preferred way for us to be to contacted.

Method: The class involves six main elements: *a)* readings from the textbook; *b)* large-group lectures; *c)* completing assigned *End-of-Chapter Questions*; *c.i)* composing E-o-C Qs for newly written text that is intended for the 3rd edition of the textbook (see below); *d)* participation in small weekly Discussion Sections; *e)* a paper; and *f)* in-class Unit Exams. Final grades are derived from elements *c-f* which, in turn, depend importantly on elements *a* and *b*.

a) Readings: The course is organized around the textbook *Essentials of Cognitive Neuroscience* (2020; 2nd edition)[1], which was written by the professor precisely because he saw a gap in pedagogical material tailored for students at precisely this stage of your education: advanced undergraduates who have some background in cognitive psychology and/or in systems neuroscience, but perhaps only limited background in the other disciplines on which cognitive neuroscience depends (i.e., the physics, chemistry, engineering, math, and statistics alluded to above). It has been used successfully in the previous iteration of this Depth course (taught by Prof. Rogers) as well as in Postle's teaching of the Honors seminar for *Psychology 414: Cognitive Psychology* and of *Psychology 720*: *Essentials of Cognitive Neuroscience* (a graduate-level seminar). There is an assigned reading for every lecture, and on the weekly schedule (below) these are identified as "*Postle* Chpt. X" or "*Postle* pp. x-y"--in the latter case students should begin with the first complete subsection on page x and/or stop at the end of the subsection that ends on page y. For some days there is an additional supplemental reading, and these will be labels as "Supplemental reading #x", x corresponding to that day's lecture number[2]. Any content from the textbook or a supplemental reading might be tested on a Unit Exam. Honors students will have a supplemental reading assigned each week; the content in Honors-only supplemental readings will NOT be tested on Unit Exams.

a.1.) optional supplementary videos: The professor has a youtube channel with narrated videos, called the Cognitive Neuroscience Compendium. These aren't required viewing, but some might be helpful, particularly the ones describing, e.g., how to conduct an EEG study, or how to design an

---

[1] Postle, B.R. (2020) *Essentials of Cognitive Neuroscience* (2nd edition). John Wiley & Sons, Hoboken, NJ. Note that the 2nd edition is markedly different from the 1st edition (published in 2015), and that all references in this syllabus to page #s, *End-of-Chapter Questions*, etc., refer to the 2nd edition. Also note that any royalties paid to the author from sales/rentals of this book to students in this class will be donated to the Dept. of Psychology to support undergraduate initiatives.
[2] The author is currently working on the 3rd edition of the book, which is expected to publish in 2026. Supplemental readings will be drafts of content that is being prepared for the 3rd edition, and that covers a topic that is important for this Spring 2025 iteration of the course.

experiment for event-related fMRI. This are flagged on specific days on the weekly schedule as "see *CNC* videos."

b) Lectures: We will get together as a group twice a week for 75-minute "power lectures" that will elaborate on that day's reading assignment. All content presented in lecture, including what may not be covered in the readings, can potentially be the basis for questions on the Unit Exams.

Laptops: Taking notes in class on a laptop is permissible, *although you should know that there is research suggesting that students who do so perform worse than do their peers who take notes on paper*. Checking email/social media in class is frowned upon, and *there is strong evidence that "multitasking" on a computer during lecture negatively impacts learning.* Furthermore, there is research suggesting that this effect even generalizes to students who are just sitting near a "multitasking" classmate–it's the "second-hand smoke" of electronic media usage. In view of this, seats in the center section of the lecture hall that are closest to the front of the room are reserved for students who will NOT have an open laptop (or electronic notepad) during lecture. After the first week of lecture, when we have a sense of what proportion of students take notes on paper, we'll determine which row in the lecture hall is the "electronic boundary."

Slides from lecture; lectures notes; videos of lecture: With rare exception, slides presented during lecture are NOT posted before lecture. (*Guess what? There is also research suggesting that grades decline when lecture slides are made available beforehand. During the first meeting of class we'll discuss the principle from cognitive psychology that explains why this is.*) Being able to sit through a presentation and selectively write down what's important, and NOT write down what's not important, is a critical skill that you'll often need to draw on throughout your adult life. (Most situations in life do not come with powerpoint slides ;-).) I also don't make the slides available after the lecture, because these can be viewed on (and captured from) the recording of each lecture that gets posted soon thereafter [see below].) Early in the semester we will make available to the entire class an example of "good notes" that have been taken by one of your classmates. If, in addition to this, you want advice about effective note taking, or want to have an example of your notes evaluated, your TA or the professor will be happy to help. (The exception to the "no slides" policy will be for individual images that are extraordinarily complicated, or perhaps that include hard-to-draw animations. These will either be flagged as they arise during lecture, and posted later that same day, or, in some cases, you'll be alerted ahead of time that a key slide is going to be posted prior to lecture and you'll be encouraged to bring a printout of that image to lecture in order to be able to make notes directly on it.)

Lectures will be videotaped, and each video posted on the course's canvas page, within a week of each lecture, though I strive for by the end of that same day.

c) End-of-Chapter Questions: As a class at the *Depth* level of the Dept. of Psychology curriculum, Psychology 505 is expected to have an extensive writing component. This will be met, in part, with frequent "short-answers" that you'll be asked to provide in response to End-of Chapter Questions ("*EoC Qs*") from the book. More specifically, every lecture has a reading associated with it, and every reading, in turn, will have several *EoC Qs* associated with it. Each *EoC Q* gets submitted twice, once as an "*initial*" response, and once as a "*final*" response; the due dates for both are listed on the weekly schedule as "*EoC Qs due: x-initial*" and "*EoC Qs due: x-final*"

The procedure for EoC Qs: Some *EoC Q*s can be answered with just one (carefully considered) sentence, and we will not accept responses longer than 5 sentences. Nonetheless, there is a total of 152 *EoC Q*s in the book, and much as we'd love it if every student responded to every question, asking you to submit 302 responses over the course of the semester is not practicable. Instead, we've come up with a procedure whereby every *EoC Q* from the book gets answered and discussed, yet individual students submit just two responses per lecture. It's complicated, but not complex. During the first week of class, your TA will contact each student, informing them which *EoC Q* from Chapter 1 they are to compose and submit as an *initial* response. *Initial* responses are submitted via the Discussion

tool on canvas, which will be set such that a student can't see other students' posts until they post their response. The deadline for submission of that first *initial* responses Sunday night, Jan. 26, at 11:59 pm. The next morning in Discussion Section we'll pull out a spinning wheel, and the student from the $Q1$ group who gets selected by the wheel ("gets spun"?) will briefly discuss how they answered the Q, and animated and robust discussion will ensue. Then, the same things happen for $Q2$ through Qn. (The spinning-wheel procedure will be implemented as randomization without replacement, meaning that no student can get spun a second time until every student has gotten spun a first time.) With 5 minutes left in class, the TA will pass around a Sorting Hat with pieces of paper that each display a number. They will do this twice. The first time around will be to determine which *EoC Q* from that day's Discussion Section they will submit as a *final* response. Repeats are not allowed, meaning that if a student pulls the same number that they had pulled for their *initial Q* they have to pull again until they get a different number. (This way, for each set of *EoC Q*s, the *Q* for which a student submits a *final* response will always be different from the *Q* for which they had submitted an *initial* response.) The *final* response is due by 11:59 pm on the Friday of that week. The second pass of the Sorting Hat will be to assign the EoC Q-*initial* response will again be due by 11:59 pm on the ensuing Sunday. This cycle will repeat each week.

 Each *EoC Q* can earn a maximum of three points: 1 for timeliness of its *initial* response; 2 for the content of its *final* response. (That is, only *final* responses get graded for content, with the caveat that *initial* responses that contain the equivalent of "blah blah blah" will get a 0.) *Final*-responses submitted late get a grade of 0. The response to each *EoC Q* does not need to be super-lengthy--sometimes just a single sentence will be sufficient, and a response should never exceed four or five sentences. (As you might have guessed, there's a principle from cognitive psychology motivating this intricate procedure for *EoC Q*s, and we'll cover that during Lecture #1.)

For Honors students, it'll be as though you have an extra *EoC Q* assigned each week, except that your extra one will actually be the EoC Q that you compose for that week's supplemental reading. As with the *EoC Q*s that you answer, your *supplemental EoC Q-final* should address a different question than did your *supplemental EoC Q-initial.* (But there will be no assignment by sorting hat, you get to choose the *supplemental EoC Q-final* that you want to compose.

       A how-to for EoC Qs: For an *EoC Q*, start by thinking about what you just read and then jotting down those initial thoughts, then go back to the reading with two goals: 1) confirming the accuracy of what you've already written, and 2) checking for whether there may be additional content relevant to the question but that you didn't include. Let's call this "first-draft *initial*". If you have time, set draft #1 aside for at least a few minutes while you do something else, then, when you return to it, read your draft #1 BEFORE reading the question that it is answering, and ask yourself *does this make sense as a standalone statement?* If it doesn't, start the process all over. If it does make sense as a standalone statement, next reread the *EoC Q* that it's answering and ask yourself *is this actually, and thoroughly, answering the question that is being asked?* (I.e., it can happen that someone asks you a question and, although you respond with a truthful statement, your response nonetheless does not actually provide the information that the question-asker was seeking to obtain. [In real life this can sometimes be the 'fault' of the question asker, because the question was insufficiently specific or otherwise poorly phrased; but that won't happen here, because the *EoC Q*s in this book have each been sifted and winnowed to near-pedagogical perfection ;-).]) If you decide that your response is not actually providing the appropriate information, start the process all over. Once you are satisfied that your response meets these criteria, we can now call it "final *initial*" and post it to that date's Discussion of *initial* responses on canvas. (If your post is submitted by 11:59 pm on the due date, and isn't just "blah blah blah" or the equivalent, your post will earn 1 point.) The settings on that folder will allow students to read each other's posts only after they themselves have posted, but you encouraged to do this, and even comment on your classmates' posts! [you know the rules: be nice, be kind, be respectful.] For Honors students composing a *supplemental EoC Q* the how-to is easy: just channel the author of the textbook! ;-)

The *EoC Q x-final* response is submitted via the Assignments section on canvas, and can earn 2, 1, or 0 points, as determined by accuracy and completeness. *EoC Q x-final* responses that miss the deadline will not be graded, and will receive a grade of 0. Soon after the due date for a set of *EoC Q x-final* responses, we will post an "ideal response" for each question. If, after seeing the ideal response, you don't understand why you didn't receive points for your response, we encourage you to bring this to office hours—the primary purpose for the *EoC Q*s is to help you learn the material, and so although a visit to office hours is unlikely to change your grade, it *is* likely to help you better understand the material.

　　Rationale: Why such an elaborate procedure for EoC Qs?, and *why so many of them?!? (and what's with the persnickity* how-tos*?!?!?!).* The answer is that it's one of those principles from cognitive psychology that keep coming up—this one is test-enhanced learning. A summary of test-enhanced learning is provided below, after the schedule of weekly assignments, but here we can summarize it as the fact that when people test themselves on information that they have recently learned (e.g., in a lecture or a reading), their retention is better than if they only study by reviewing their notes. Please note that the customary rules of thumb about academic honesty pertain to the *EoC Q*s as well as to other aspects of this course. Thus, for example, each student is expected to write each response to an *EoC Q* themself. Furthermore, using Chat GPT or any other AI would defeat the pedagogical purpose of the *EoC Q*s altogether.

d) Discussion Sections: A primary function of Discussion sections is discussion of the content highlighted by the currently relevant *EoC Q*s and, more broadly, the associated readings and lectures. Additionally, Discussion sections are an opportunity for us to address the heterogeneity of backgrounds among students enrolled in the class. More specifically, in an ideal world, each student enrolled in Psychology 505 will have previously taken both of the Breath-level classes that are listed as prerequisites for enrollment: Psychology 414 ("Cognitive Psychology") and Psychology 454 ("Behavioral Neuroscience" [but when you're describing it to someone outside the class call it "systems neuroscience," because that's actually the discipline covered in Psych 454; the name "Behavioral Neuroscience" is a vestige from a previous era]). A reality of running a large major (as are the Psychology major and the Neurobiology major) at a large state university, however, is that prerequisites can't always be set to satisfy the instructor's ideal. What this means is that many of you won't have the background in cognitive psychology or in systems neuroscience that some of your classmates do. Although the professor will encourage questions and discussions during lecture, it wouldn't be practicable for him to spend large portions of each lecture "re-teaching" content that should have been learned in either Psychology 414 or Psychology 454. In some instances his response to questions raised in lecture is likely to be "that's a question that would have been covered in Psychology 414/454 and we don't have time to address here in lecture, and so I encourage you to raise it in your Discussion Section." In the Honors Discussion Section my aspiration is that we get through both the assigned *EoC Qs* and the *supplemental EoC Qs*, but for weeks when we don't, the *supplemental EoC Qs* will suffer, and the professor will follow-up with written feedback about these in the canvas discussion. (I don't want you to unfairly get less opportunity to discuss material that could potentially show up on a Unit Exam.)

Further along in the semester, as students select a topic for their paper, each student will make a brief (~5 min) presentation to the class about why they selected their topic. Ideas for what these brief presentations might address include *how does this topic relate to my interests outside of this class?*, or *what is the new information that I've learned in this class that I want to learn even more about, and why?* Honors students will be expected to use more big words during their presentations. (just kidding)

e) paper. At the end of each chapter in the textbook, after the *EoC Qs*, there are two lists of publications from the peer-reviewed scientific literature: "Other Sources Used" and "Further Reading." Your paper should be anchored by or somehow relate to one of these papers. By Wednesday, February 26, you'll need to have submitted a 1-sentence proposal for a paper topic, which your TA will respond to with an

approval or with feedback about what aspect(s) of your proposal are not satisfactory. During Discussion Section on March 3 and March 10 students will make their in-class presentation.

The body of the paper should be >2500 words but <5000 words (i.e., References do not count toward the page total). The paper must cite a minimum of eight sources from the peer-reviewed literature. All the conventions that you learned in Psychology 225 (Research Methods) or the equivalent course apply (i.e., follow the style and formatting conventions in the Publication Manual of the American Psychological Association. A draft of the paper must be submitted by March 23, the first Sunday of Spring Break. Your TA will do their best to read over your draft and return it to you with comments and suggestions by the week of March 31. The final draft of the paper is due April 27 at 11:59 pm.

f) in-class Unit Exams. There are three in-class Unit Exams. These are the conventional multiple choice exams that entail answering questions by marking responses on a "bubble format" exam sheet with a #2 pencil, the exam sheets then scored by Scantron. Each Unit Exam will only test knowledge of content from the preceding eight lectures of the course; that is, they are *not* cumulative, and Unit Exam #3 will *not* be a cumulative final testing content from the entirety of the semester. The grades from only the two Unit Exams with the highest scores will be used in the calculation of a student's final grade.

Grading: Final grades are calculated as
$$(.3*EoC\ Qs) + (.1*Discussion) + (.2*paper) + (.4*Unit\ Exams)$$

Letter grades will be assigned using criteria no more stringent than: A ≥ 90%; AB ≥ 87%; B ≥ 80%; BC ≥ 75%; C ≥ 70%; D ≥ 63%. That is, *there is no curve*, *so the grade you earn is a direct function of your own performance, and uninfluenced by the class average*.

The grade for each of these elements is determined as follows

c) End-of-Chapter Questions:

element	Total # of possible points
EoC Qs x-initial, on time	20
EoC Qs x-final, on time + content	40

Final *EoC Q* grade = (total # points earned)/60.

d) Discussion Section: This portion of your grade is based on attendance, quality of participation in in-class discussions[3], and oral presentation of idea for paper.

e) paper: Graded for accuracy of content and clarity and effectiveness of exposition. The grading scale for the paper is 0-100 possible points. The final grade for papers for which the *draft* was submitted after the deadline will be lowered by 10 points. The final grade for papers that are submitted after the deadline of April 27 at 11:59 pm. will be lowered by 10 points for each calendar day that it is late.

Papers may not use word-for-word text generated by AI (e.g., Chat GPT or any other large-language model [LLM]). If your TA is suspicious that a that a section of text from a paper reads as though it was generated by an AI, the author of that paper will be asked to attend a writing session supervised by the TAs and professor, at which they will be asked to write, de novo, a section of text that covers the same content as the suspicious section of their paper. If the style and substance of the "supervised writing" is judged to be different from that of the submitted paper, the author will receive a grade of 0 on the paper.

---

3 See section on Guidelines for evaluating in-class participation, after the schedule of weekly assignments

f) in-class Unit Exams: The average of two highest exam scores is used for calculation of the final grade.

At the end of the semester, there will invariably be students whose numerical grade in the course is extremely close to, but just below, a letter-grade cut-off. In order to be fair to all students, however, **we observe a strict policy of not rounding numerical grades to the nearest integer** (and not entertaining requests to deviate from this policy on an individual basis). There are no opportunities for "extra credit" projects that might boost one's score. Your final grade for the course is determined solely by the criteria listed above.

Date	Lecture # and Topic	Readings (and supplemental online content)

<div align="center">Section I: The Neural Bases of Thinking</div>

January 21	1. Introduction/History	*Postle* Chpt. 1 + pp. 36-40 (*CNC* "Anatomy, Physiology, and Methods" videos)
January 23	2. The Brain	*Postle* Chpt. 2 + pp. 40-47 + pp. 73-75 + supplemental reading #2 (*CNC* "Anatomy, Physiology, and Methods" videos)

Jan 26   EoC Qs due: Chpt. 1-initial + Chpt. 3 (Qs 1-2)-initial

<div align="center">Section II: Sensation, Perception, Attention, and Action</div>

January 28	3. Sensation and Perception of Visual Signals	*Postle* Chpt. 4 + pp. 51-55; pp. 56-61; (*CNC* "Anatomy, Physiology, and Methods" videos)
January 30	4. Audition and Somatosensation	*Postle* Chpt. 5 + pp. 55-56 + supplemental reading #4

Jan 31   EoC Qs due: Chpt. 1-final+ Chpt. 3 (Qs 1-2)-final

Feb 2   EoC Qs due: Chpt. 4 (Qs 1-4)-initial; Chpt. 5)-initial Chpt 3 (Qs 3-6)-initial

February 4	5. The Visual System	*Postle* pp. 135-151, pp. 61-70
February 6	6. The Dorsal Stream	*Postle* pp. 161-175; pp. 70-73 + supplemental reading #6

Feb 7   EoC Qs due: Chpt. 4 (Qs 1-4)-final; Chpt. 5-final + Chpt 3 (Qs 3-6)-final

Feb 9   <u>EoC Qs due</u>: Chpt. 4 (Qs 5-9)-initial; Chpt. 6 (Qs 1-7)-initial; Chpt. 7 (Qs 1-5)-initial

February 11	7. The Ventral Stream	*Postle* pp. 153-158, pp. 78-82
February 13	8. Attentional Modulation of Visual Processing	*Postle* pp. 175-187 + supplemental reading #8

Feb 14   <u>EoC Qs due</u>: Chpt. 4 (Qs 5-9)-Final; Chpt. 6 (Qs 1-7)-final; Chpt. 7 (Qs 1-5)-final

Feb 16   <u>EoC Qs due</u>: Chpt. 6 (Qs 8-10)-initial; Chpt. 7 (Qs6-8)-initial; Chpt. 3 (Qs 7-9)-initial

February 18	9. Skeletomotor Control I	*Postle* pp. 188-206 + supplemental reading #9

<div align="center">**Note: Lecture 9 content will not be tested on Unit Exam 1**</div>

Feb 19   <u>EoC Qs due</u>: Chpt. 6 (Qs 8-10)-final; Chpt. 7-(Qs 6-8)-final; Chpt. 3 (Qs 7-9)-final

February 20	**Unit Exam 1**	

Feb 23   <u>EoC Qs due</u>: Chpt. 8 (Qs 1-6)-initial

February 25	10. Skeletomotor Control II	*Postle* pp. 206-214

Feb 26	***1-sentence paper proposal***	
February 27	11. Oculomotor Control	*Postle* pp. 218-226 + supplemental reading #11
Feb 28	*EoC Qs due: Chpt. 8 (Qs 1-6)-final*	
Mar 2	*EoC Qs due: Chpt. 8 (Qs 7-9)-initial; Chpt. 9 (Qs 1-4)-initial*	
March 4	12. The Control of Attention	*Postle* pp. 226-238
March 6	13. Visual Object Recognition and Knowledge	*Postle* Chpt. 10 + supplemental reading #13
Mar 7	*EoC Qs due: Chpt. 8 (Qs 7-9)-final; Chpt. 9 (Qs 1-4)-final*	
Mar 9	*EoC Qs due: Chpt. 9 (Qs 5-8)-initial; Chpt 10-initial*	

<u>Section III: Mental Representation and Memory</u>

March 11	14. Neural Bases of Memory	*Postle* Chpt. 11
March 13	15. Organization of Long-Term Memory: Encoding Into Declarative Memory	*Postle* pp. 291-299 + Supplemental Reading #15 (Event Boundaries)
Mar 14	*EoC Qs due: 9 (Qs 5-8)-final; Chpt. 10-final*	
Mar 16	*EoC Qs due: Chpt. 11-initial; Chpt 12-initial*	
March 18	16. Organization of Long-Term Memory: Expression of Nondeclarative LTM and Retrieval from Declarative LTM	*Postle* pp. 300-306 + Supplemental Reading #16 (Reinforcement Learning)
Mar 19	*EoC Qs due: Chpt. 11-final; Chpt. 12 -final*	
March 20	**Unit Exam 2**	
Mar 23	***due date for initial draft of paper***	
March 25	No class: Spring Break	
March 27	No class: Spring Break	

<u>Section IV: High-Level Cognition</u>

Mar 30	EoC Qs due: *Chpt. 14 (Qs 1-5)-initial*	
April 1	16. Working Memory I	*Postle* pp. 330-348
April 3	17. Working Memory II	*Postle* pp. 349-360 + supplemental reading #17
Apr 4	*EoC Qs due: Chpt. 14 (Qs 1-5)-final*	
Apr 6	*EoC Qs due: Chpt. 14 (Qs 6-8)-initial; Chpt. 15 (Qs 1-5)-initial*	
April 8	18. Cognitive Control I	*Postle* pp. 364-378
April 10	19. Cognitive Control II	*Postle* pp. 378-388 + Supplemental Reading #19 (ERP correlates of RPEs)

| Apr 11 | *EoC Qs due: Chpt. 14 (Qs 6-8)-final; Chpt. 15 (Qs 1-5)-final* |
| Apr 13 | *EoC Qs due: Chpt. 15 (Qs 6-7 + supplementary Qs 1-2)-initial* |

| April 15 | 20. Decision Making I | *Postle* pp. 392-402 + Supplemental Reading #20 (Drift Diffusion Modeling) |
| April 17 | 21. Decision Making II | *Postle* pp. 402-412 + Supplemental Reading #21 (Commonalities between Perceptual and Value-Based Decision Making?) |

| Apr 18 | *EoC Qs due: Chpt. 15 (Qs 6-7 + supplementary Qs 1-2)-final* |
| Apr 20 | *EoC Qs due: Chpt 16-initial* |

| April 22 | 22. Social Behavior | *Postle* Chpt. 17 + supplemental reading #22 |

| April 24 | 23. Emotion I | *Postle* pp. 440-450 |

| Apr 25 | *EoC Qs due: Chpt 16-final* |
| Apr 27 | *EoC Qs due: Chpt. 17-initial; Chpt. 18-initial;* **paper due** |

| April 29 | 24. Emotion II | *Postle* pp. 450-457 |

| April 30 | *EoC Qs due: Chpt. 17-final; Chpt. 18-final* |

| May 1 | **Unit Exam 3** |

*   *   *

Test-enhanced learning:

The pedagogical motivation for the *EoC Q*s is a phenomenon that has been studied extensively by cognitive psychologists, called the test-enhanced learning effect (or, sometimes, just "the test effect"). In a different course the professor has implemented a similar intervention, the its success is documented in *Hattikudur, S. and Postle, B.R. (2011). Effects of test-enhanced learning in a cognitive psychology course.* Journal of Behavioral and Neuroscience Research, *9, 151-157.* (This paper is downloadable from the "publications" tab at postlab.psych.wisc.edu.)

Guidelines for evaluating in-class participation:

<u>Outstanding Contributor</u>: 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. (grade = A)

<u>Good Contributor</u>: 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. (grade = AB)

<u>Adequate Contributor</u>: 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. (grade = B)

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. Note that this status will be applied to students who are chronically late to class, because not being present is equivalent to being 'not a member of the class.' (grade = C)

Unsatisfactory Contributor: Contributions in class reflect inadequate preparation. Ideas offered are seldom substantive, provide few if any insights and never offer a constructive direction for the class. Integrative comments and effective challenges are absent. If this person were not a member of the class, valuable airtime would be saved. (grade = D)

**Please note: A student's class participation grade will be negatively impacted if the TA has the impression that the student has spent an excessive amount of class time engaged in activities unrelated to class (e.g., checking social media, sending emails, etc.).

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.

ACADEMIC INTEGRITY

By enrolling in this course, each student assumes the responsibilities of an active participant in UW-Madison's community of scholars in which everyone's academic work and behavior are held to the highest academic integrity standards. Academic misconduct compromises the integrity of the university. Cheating, fabrication, plagiarism, unauthorized collaboration, and helping others commit these acts are examples of academic misconduct, which can result in disciplinary action. This includes but is not limited to failure on the assignment/course, disciplinary probation, or suspension. Substantial or repeated cases of misconduct will be forwarded to the Office of Student Conduct & Community Standards for additional review. For more information, refer to https://conduct.students.wisc.edu/academic-misconduct/.

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 the individual, 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 the instructor, make an appointment to speak to the Associate Chair for Undergraduate Studies, Professor Kristin Shutts, kshutts@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 Allyson Bennett (allyson.j.bennett@wisc.edu) or the Chair of the Psychology Department Climate & Diversity Committee, 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://osas.wisc.edu/report-an-issue/bias-or-hate-reporting/.

CONCERNS ABOUT SEXUAL MISCONDUCT

All students deserve to be safe and respected at UW-Madison. Unfortunately, we know that sexual and relationship violence do happen here. Free, confidential resources are available on and off campus for students impacted by sexual assault, sexual harassment, dating violence, and stalking (regardless of when the violence occurred). You don't have to label your experience to seek help. Friends of survivors can reach out for support too. A list of resources can be found at https://www.uhs.wisc.edu/survivor-resources/

If you wish to speak to someone in the Department of Psychology about your concerns, you may contact the Chair of the Department, Professor Allyson Bennett (allyson.j.bennett@wisc.edu) or the Associate Chair of Undergraduate Studies, Professor Kristin Shutts, (kshutts@wisc.edu). Please note that all of these individuals are Responsible Employees (https://compliance.wisc.edu/titleix/mandatory-reporting/#responsible-employees).

ACCOMMODATIONS POLICIES

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.

UW-Madison students who have experienced sexual misconduct (which can include sexual harassment, sexual assault, dating violence and/or stalking) also have the right to request academic accommodations. This right is afforded them under Federal legislation (Title IX). Information about services and resources (including information about how to request accommodations) is available through Survivor Services, a part of University Health Services: https://www.uhs.wisc.edu/survivor-services/ .

DIVERSITY & INCLUSION

Institutional statement on diversity: "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/