

MEDICAL PSYCHOLOGY

Class Times: M/W/F 9:30-10:25am in Carnegie 113 | Office Hours: M 3-4pm/Th 3-4pm/by appointment

Instructor

Dr. Justin Hulbert
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Course Materials

Shapiro (2024). *Biopsychology: Fundamentals and Contemporary Issues* (v2.0). Boston, MA: FlatWorld. ISBN (Digital): 979-8-88794-311-4

A copy of this required text is on reserve at the Ladd Library circulation desk.

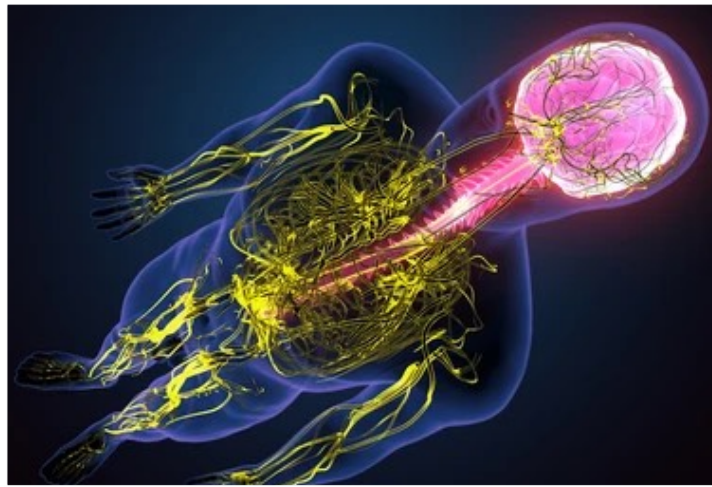
Additional materials will be posted on **Lyceum**.

Prerequisite(s)

PSYC 101. Not open to students who have received credit for NS/PY 160.

Assessments

- Quizzes: **52%** (4*x13%)
*lowest of 5 scores dropped
- Research in the Wild: **10%**
- Case Presentation: **10%**
- Case Report: **5%**
- Final Reflection: **10%**
- Research Participation: **5%**
- Engagement: **8%**
- Extra Credit: **+5 extra % pts.**

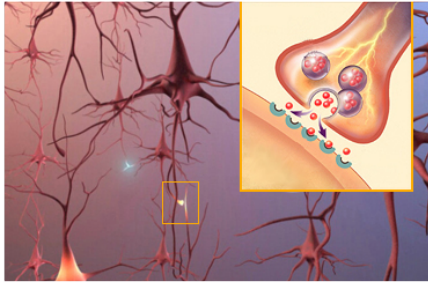


Course Overview

This course explores the interplay between brain function and mental health, focusing on how neural processes shape—and are shaped by—psychological experiences and interventions. Beyond learning core concepts in neuroanatomy, neural communication, and psychopharmacology, you will investigate how disruptions in these systems contribute to neurological and psychiatric disorders, and how treatments work at the biological level. The course emphasizes applied, active learning through case workshops, miniature lab demonstrations, and structured debates. Through reading and summarizing empirical articles, presenting representative clinical cases, and debating policy and ethical issues, you will develop the skills to evaluate evidence and connect neuroscience to the complexities of medical and psychological practice.

Joint Responsibilities

Achieving the broad aims of this course requires commitments from all of us. Below you will find an outline of some of those



Learning Objectives

By the end of this course, you will be able to:

- Explain how neurons communicate at the cellular and systems level.
- Analyze brain-behavior relationships by explaining the functions of major neural systems and evaluating how their disruption produces observable changes in cognition, emotion, or behavior.
- Predict how structural (e.g., lesions), pharmacological, or stimulation-based (e.g., TMS, tDCS) perturbations alter neural signaling and system behavior, and use case-based reasoning to explain likely outcomes for cognition and behavior.
- Evaluate treatment options by linking mechanisms to efficacy, risks, and ethical considerations.
- Engage in the research process and communicate scientific ideas effectively.

responsibilities. Did I leave something out? Let me know—we can discuss additional responsibilities/group norms as a class.

- **Your instructor agrees to...**

- a) Make himself available outside of class during posted office hours (and by appointment, as necessary) to answer questions, provide extra help, and discuss matters related to the course of study.
- b) Respond in a timely fashion to email queries. I encourage you to email me with questions, as this is often easier and faster than arranging a meeting. However, I aim to set healthy work-life boundaries, and I do not check email at home. Instead, I check email primarily once per day, usually around 5 or 6pm. This helps me give more focused attention to your messages (instead of fragmented replies throughout the day) and also models good practices for managing time and focus. You generally can expect a response within one business day, and often sooner if your message arrives before my daily email block. Messages sent in the evening or on weekends will be answered the next school day. Don't wait until the last moment (e.g., right before a quiz/deadline) to contact me. For questions that require more detailed discussion, I may suggest we meet in person during office hours.
- c) Facilitate a thoughtful, considerate, and engaging learning environment.
- d) Make available on Lyceum a skeleton of lecture slides, suitable for downloading/printing prior to class. Note that these skeletons are intended to supplement note-taking (e.g., by providing important/complicated figures) but are not a replacement for attending class. Classroom technology and circumstances permitting, a recording of the class will be posted to Lyceum's Kaltura Media Gallery within 24 hours of each lecture for the benefit of students who were ill or otherwise unable to attend class due to extenuating



Best Practices

You are encouraged to:

- Let me know if I can clarify a concept or slow down
- Ask questions during lecture so that everyone benefits

To make the most of office hours, it is recommended that you:

- Avoid waiting until the last minute (e.g., before a quiz/due date) to attend. Seeking help well in advance of deadlines will leave you plenty of time to act on advice discussed.
- Email the instructor in advance or bring with you a concise list of topics/questions you wish to discuss, if possible. Itemizing in this way helps ensure all your questions are addressed and saves you time in the long run. That said, *dropping by for a spontaneous, broader chat is also most welcome.*

circumstances. These recordings may also be used to review material covered in class.

- e) Provide adequate time to complete assignments, minimize changes to the published schedule/ assignments, and immediately notify students about any such changes.
 - f) Provide study/review guides in advance of each graded quiz to help direct studying.
 - g) Provide comprehensive and fair assessments of materials presented or assigned. Assignments, with a level of feedback commensurate with the nature and aims of the task, will be returned to students in a timely fashion.
 - h) Create and welcome opportunities for students to provide feedback on the course/teaching throughout the semester.
- **You are responsible for...**
 - a) Showing up to class regularly, on time, and prepared, as detailed in the below Attendance policy.
 - b) Checking your **Bates email** and **Lyceum** regularly for important announcements about the course, including alterations due to weather emergencies and other Unforeseen Events.
 - c) Giving your participation, readings, and assignments the time and effort they deserve. There is no substitute for a deep and focused consideration of the material, spaced out over time and considered actively.
 - d) Substantively participating in class discussions and other relevant activities. This could, for instance, involve asking/answering questions related to the offered course materials. Note that a top-notch level of participation does not necessitate responding to every question raised in class or online; active or passive efforts to welcome contributions from everyone in the class are also looked upon favorably. Though you are welcome to challenge your fellow



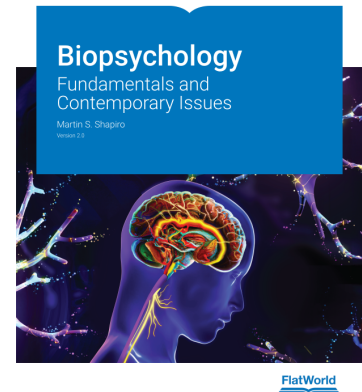
students' or your instructor's thoughts and conclusions, please do so in a fashion that is respectful. Challenge ideas, not the person raising them. More information can be found in the Diversity and Inclusion section, below.

- e) Submitting assignments on time, digitally via Lyceum. Extensions may be granted for extenuating personal circumstances or illness. Please reach out as soon as you think you may need an extension so we can work out an arrangement. Otherwise, any late assignment will immediately be subject to a 10% penalty, with an additional 10% penalty leveled against that assignment's score for every 24 hours it remains late. *No late work will be accepted after 11:59pm on the day final examinations end for the semester (according to the published academic calendar).* Make-up quizzes/exams for events explicitly described by Student Affairs (<https://www.bates.edu/accessible-education-student-support/makeup-exam-requests/>) will be given only when the student provides documentation substantiating the absence for the *precise day* of the quiz/exam (not the days leading up to it). Make-up quizzes/exams may be in the form of short essay, long essay, and/or oral defense, at the instructor's discretion. Information for students requiring alternative testing or other accommodations (e.g., due to disability) can be found under the Accessibility subheading, below.
- f) Using electronic devices wisely and respectfully. See section on In-Class Electronic Device Policy, below.
- g) Upholding academic integrity. See the sections on Academic Integrity and Use of Artificial Intelligence (AI), below.

Textbook

- There are a number of high-quality textbooks on the market that would be suitable for a course like this. But the cost of such a comprehensive, up-to-date, engaging, peer-reviewed text that

links research to real-world applications tends to be astronomical these days, especially in a rapidly changing field like biopsychology. Fortunately, Flatworld publishes a full-featured textbook (ISBN: 979-8-88794-311-4) by Prof. Martin S. Shapiro that covers the bases at a much reduced price point. Note that we will be using **Version 2.0** of this textbook for our course. If you're still shopping for courses or getting your financial aid in order, it's possible to preview the first chapter for free by visiting <https://support.flatworldknowledge.com/en/articles/8796785-first-chapter-access>. A copy of the full, required text is on reserve on the 1st floor of Ladd Library at the circulation desk.



- Otherwise, to access the full, *required* text, you may purchase it through the Bates Bookstore or directly through the publisher by visiting <https://students.flatworldknowledge.com/engage/courses/2612418>. Note that it's typically cheaper to purchase directly through the publisher, as the Bookstore will likely charge a premium; however, the Bookstore will accommodate certain forms of financial aid. If you purchase the text through the Bookstore, you will receive a redemption code that you will need to enter at the bottom of the aforementioned website. This will give you access to the text and link you to our particular course.
- There are a number of different formats available for purchase, starting at \$36.95 (if purchased directly through the publisher). The least expensive "Basic" option will give you access to the online reader. This searchable, mobile-friendly format allows you to take notes directly in the digital text and comes with self-study tools like flashcards and practice quizzes, as well as the AI-powered "SmartHelper" study tool. If you intend to read the textbook offline, there's an upgrade option to receive a downloadable .pdf along with the "Standard" online access (\$56.95). The Standard package also comes with "Audiobook" and "Podcast" features, making the text even more accessible. Or, if you prefer a hardcopy to go along with the online access, you can upgrade to packages that also come with a color printed textbook.
- If you have trouble accessing the text or using one of its functions, your issue may be answered by browsing the student FAQ (<https://support.flatworldknowledge.com/en/collections/461458-students>) or by using the chat feature found in the bottom-right corner of that webpage.
- More information about accessibility features associated with this text can be found here: <https://support.flatworldknowledge.com/en/collections/12300007-accessibility>.
- Because we only have 55-minute class meetings over 12 weeks of the semester, the textbook is not optional "extra"—it's how you build depth and stability. For each assigned reading, start before class with a curious, big-picture mindset: your goal is not mastery, but to get oriented to

the main questions, notice what feels confusing, and come in with a few things you want clarified. Then, after class, return to the reading for that day to solidify what we covered and fill in any gaps. In most cases, you should prioritize the material from lecture, discussion, activities, and homework, and use that as a guide for which parts of the text to focus on. Similarly, quizzes will primarily emphasize material that was covered in class or explicitly highlighted on the study guide; *if something appeared only in the textbook and was never connected to lecture/discussion/activities/homework or the study guide, it is highly unlikely to show up on a quiz*. This does not mean the textbook is unimportant—reading is how you develop understanding beyond what we can do in class, and it will make the lecture material stick—but it does mean *you should not feel like you need to memorize every detail on every page*. That said, if a particular topic grabs you, you're encouraged to go deeper than what's required; in fact, you should use your own learning goals (in addition to the course learning objectives) to guide how you engage with the readings, classes, and assignments so you get the most out of the course.

Assessments

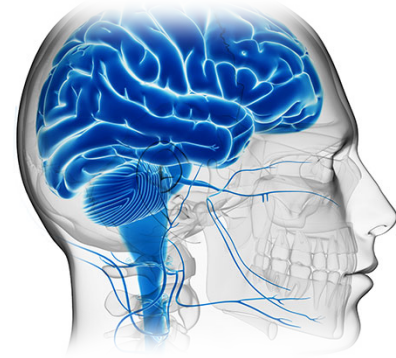
- **Quizzes** (*worth a total of 52% of your final grade based on four equally weighted quiz scores*) are a relatively low-stakes way to assess and reinforce your understanding of course materials from both class sessions and assigned readings. Research shows that frequent quizzing is one of the most effective ways to enhance learning. There will be five graded quizzes during the semester (separate from take-home practice quizzes), but only your *highest four regular quiz scores* will count toward your final grade (i.e., I'll drop your lowest of five quiz scores). Quizzes will primarily be multiple choice with 2-3 short-answer questions, but may also include matching or fill-in questions. They are designed to test both foundational knowledge, critical thinking, and application of concepts.
- **Timing:** The first four graded quizzes will be administered during class time. The final quiz (Quiz #5) will take place during the *first 55 minutes* of your scheduled final exam period (i.e., not the full two-hour block the Registrar sets aside for final exams). Unlike the first four, the *final quiz will be cumulative*, covering material from the entire semester. If you are satisfied with your previous four quiz grades, however, then you can skip the final quiz, which will receive a zero but be dropped. The choice is yours.
- **Coverage:** Any material from assigned readings may appear on the quizzes, even if not discussed in class. That said, I'd advise prioritizing class topics and use the readings to deepen and support your understanding. A good overall study strategy: before class, read with a curious, big-picture mindset (main questions, core vocabulary, basic logic);

after class, return to the reading more selectively to fill in gaps and solidify anything flagged on the study guide. If you're short on time, prioritize whatever was emphasized in lecture or discussion, then use the reading to define terms precisely, interpret key figures, and connect mechanisms to real examples. If you're unsure what matters most, let the study guide (and your own flagged questions from the reading) tell you what deserves a second pass.

- **Practice Quizzes:** Before each of your five graded quizzes, I will post an optional practice quiz on Lyceum. The multiple-choice portion is auto-scored with immediate feedback on the correct answer; the short-answer questions from that quiz are included below the multiple-choice section as ungraded self-check items, with model answers provided so you can compare your own responses. It isn't timed or proctored, take it whenever and however many times you'd like. Grades that Lyceum automatically assigns for your practice quizzes won't factor into your actual grade. Instead, consider the practice quizzes as opportunities to get a feel for what the actual, in-class quizzes will be like, as well as retrieval practice. Retrieval practice (being asked to produce an answer instead of just re-reading your notes) is one of the best-evidenced ways to build durable memory for material, and that holds even when you get a question wrong: an incorrect answer is useful information, it tells you exactly which section to go back and study before the real quiz. Because each practice quiz is released before we've finished covering the material it draws on, and because course pacing can shift a little as the semester goes on, a practice quiz may not perfectly match what we've covered by the time you take it, or what ends up on your actual (graded) quiz. A low score could simply be a sign of that, not a lack of effort, so don't stress about the number Lyceum assigns to your attempt. Neither completing a practice quiz nor the score Lyceum automatically calculates affects your final grade in any way (even if it appears in your Lyceum grade book). That said, completing each practice quiz in good faith (i.e., trying your best and attempting to answer all questions) can give you some Extra Credit; see below for details.
- **Open Notes Policy:** For each quiz, you may bring *one 8.5 × 11" sheet of notes (single-sided)*. You can handwrite/type/draw on this sheet whatever you think would help you most on the quiz. (Pro tip: Actively consolidating and organizing your notes before each quiz both improves your notes as a resource and itself serves as an effective study strategy.) Unless you have specific accommodations, digital resources and textbooks are not permitted. If your academic accommodation allows digital resources, please email me to arrange to take the quizzes in the testing center.
- **Accessibility:** Students with testing accommodations should schedule quizzes with the Office of Accessible Education at least three business days in advance.

- **Research in the Wild** (10% of your final grade)

asks you to take a real-world claim you've actually encountered, an ad, a headline, a wellness product, a policy debate, a social media post, anything neuroscience- or psychology-adjacent, and hold it up against the actual evidence. This is a chance to practice a skill you'll need well beyond this course: figuring out whether something that sounds scientific actually is. Specifically, you will:

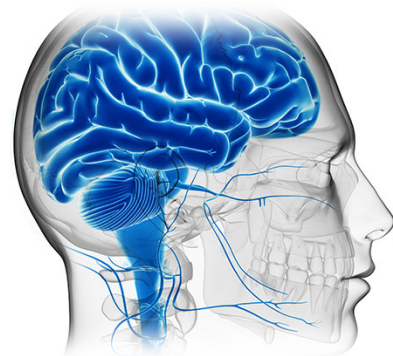


- Choose a real-world artifact or claim that genuinely interests you. This could be an ad promising a brain-training app will raise your IQ, a wellness influencer's claim that a supplement lowers cortisol, a headline like "coffee after 2pm ruins your sleep," the ongoing debate over youth tackle football and CTE risk, or a social media post claiming humans only use 10% of their brains, or anything else along those lines. Save or screenshot it; you'll submit it along with the other required materials.
- Find one *peer-reviewed empirical article* that's directly relevant to evaluating that claim, whether it supports, complicates, or debunks it. Your empirical article must report original data (an experiment or observational study) with Methods and Results sections, not a review, theoretical, meta-analysis, or perspective piece, and must be squarely within neuroscience, psychology, or a closely related field. It should feature a neural or psychological mechanism, a recognized method or measure, or a brain-behavior question where that link is central, not incidental.
- Read that article yourself, in full, *before* using any AI tool. Once you've done your own reading, use NotebookLM/Gemini Notebook (available for free to you as a Bates student by going to <https://notebooklm.google.com/> and logging in with your Bates credentials) to help you organize and think through your sources; NotebookLM/Gemini Notebook is required for this step specifically, rather than a general-purpose AI tool like Gemini, ChatGPT, or Claude, because it *only* draws on the sources you upload to it, so it can't invent claims that aren't actually in your article the way a general chatbot might. Upload the empirical article and, where relevant, the real-world artifact as sources, and use the tool to check your understanding, surface connections, or organize your thinking, not to write your explainer for you.
- Record and submit a roughly 2-minute "explainer" (video or audio only, your choice) answering: (1) what's the real-world claim, (2) what does the research actually show, (3) does the evidence support, complicate, or debunk the claim, and why does that matter, and (4) how did using the AI tool change or add to your understanding of the article or the claim, after your own initial read?

- Submit one companion slide (as a PDF, please export or print to PDF rather than sharing a Google Slide link) with the original artifact/claim the full citation of your empirical article (in APA style; see APA formatting under Additional Resources below), your conclusion about the artifact/claim, and the most relevant finding from the empirical article that supported that conclusion.
- Be graded using the following rubric:

	Points
Real-world artifact/claim clearly included on the slide	1
Empirical source is appropriate (peer-reviewed, empirical, actually tests the claim) and correctly cited in APA style	2
Explainer accurately represents what the study found	2
Clear conclusion given, with reasoning tied to the evidence, and consistent between the slide and the explainer	2
Companion slide complete: artifact/claim, citation, conclusion, and supporting finding all present	1
AI reflection is specific about what the tool contributed, not just that it was used	1
Recording is roughly on time (about 2 minutes) and clearly communicated	1

- **Case Study Presentation** (10% of your final grade) will involve developing a representative case study to illustrate a clinical condition that will be randomly assigned to groups of 3-4 students. Cases may involve conditions such as neurodegenerative disorders, psychiatric illnesses, sensory and motor deficits, or the effects of brain injury. For this assignment, you will construct a fictional but representative case, drawing on empirical studies, clinical reports, and the broader scientific literature. This ensures your case is realistic, medically plausible, and grounded in neuroscience research, while still giving you the freedom to shape the narrative and highlight key features. To this end, you should conduct your own research to identify and integrate further relevant sources—this is an opportunity to practice extending beyond assigned



readings and evaluating evidence independently. Each group will have *8 minutes* to present their case at the end of the semester. With only 8 minutes, a little rehearsal will go a long way in helping you make the most of your time. We'll be keeping to conference-style timing, so talks will end when the time is up. All group members are expected to play an active role in both the development of the case study and the in-class presentation. Contributions should include substantive involvement in researching, drafting, and presenting the material, rather than leaving all work to one or two students. The goal of these short presentations is to deepen understanding of how neuroscience and psychology intersect in applied, real-world contexts. A designated group member should be sure to *upload their group's presentation to Lyceum* (in PowerPoint, Keynote, or .pdf form—convert to one of these formats if you created your presentation using Google Slides) *by 10am* on their scheduled presentation day. While your presentation will be delivered in slideshow presentation format, you may find it helpful to review examples of written case studies. Resources for familiarizing yourself with the case study format are provided in the "Additional Resources" section of the syllabus. Your group's presentation should:

- **Summarize the case:** Provide a clear, concise account of the key background, presenting symptoms, and any relevant test results.
- **Analyze the condition:** Discuss potential diagnoses, differential diagnoses, and relevant neurobiological, psychological, or pharmacological mechanisms.
- **Integrate course concepts:** Draw on material from readings, lectures, and discussions (including neuroanatomy, neurotransmission, psychopharmacology, etc.) to frame the case in a broader medical psychology context.
- **Propose a treatment plan:** Recommend treatments supported by evidence, noting their benefits and risks. If no effective options are available, explain how symptoms might be managed in practice and highlight what future therapies or research could offer.
- **Highlight open questions:** Identify gaps in the research or aspects of the case that remain uncertain, showing awareness of the complexity of real-world cases.

Cases will be assigned to groups randomly, and may include:

- *Prosopagnosia* – The inability to recognize faces despite intact vision
- *Hemispatial Neglect* – Ignoring half of space after parietal damage
- *Wernicke's Aphasia* – Fluent but nonsensical speech due to temporal lobe damage
- *Broca's Aphasia* – Effortful, non-fluent speech after frontal lobe damage
- *Capgras Delusion* – Belief that loved ones are impostors
- *Locked-In Syndrome* – Conscious awareness but almost complete paralysis
- *Narcolepsy* – Sudden sleep attacks and loss of muscle tone
- *Tourette Syndrome* – Involuntary motor and vocal tics with basal ganglia involvement
- *Migraine with Aura* – Sensory disturbances preceding severe headache
- *Bipolar Disorder* – Alternating episodes of mania and depression

- *ADHD* – Persistent inattention and/or hyperactivity-impulsivity
- *Functional Neurological Disorder (Conversion Disorder)* – Neurological symptoms (e.g., weakness, seizures, gait problems) without a structural cause, arising from disrupted brain function
- *Anosognosia* – Unawareness of one's own illness or deficit, often following stroke or in some dementias

Your Case Study Presentation will be graded using the following rubric:

	Strong	Adequate	Needs Work
<i>Summarize the case</i>	Clear, concise account of key background, presenting symptoms, and relevant test results	Covers most key background but omits a detail or two	Missing key background or symptoms; hard to follow
<i>Analyze the condition</i>	Discusses potential diagnoses, differential diagnoses, and relevant neurobiological, psychological, or pharmacological mechanisms with accuracy	Discusses diagnosis and mechanism but the differential is thin or partly inaccurate	Mechanism missing, vague, or inaccurate
<i>Integrate course concepts</i>	Explicitly connects the case to multiple course concepts (neuroanatomy, neurotransmission, psychopharmacology, etc.)	Connects to at least one course concept	Little or no connection to course material
<i>Propose a treatment plan</i>	Evidence-based treatments with benefits/risks; if none are effective, explains symptom management and future directions	Treatment mentioned but under-supported	No meaningful treatment discussion
<i>Highlight open questions</i>	Identifies genuine gaps in the research or uncertain aspects of the case	Identifies at least one open question, though fairly generic	No open questions identified
<i>Summarize the case</i>	Clear, concise account of key background, presenting symptoms, and relevant test results	Covers most key background but omits a detail or two	Missing key background or symptoms; hard to follow
<i>Analyze the condition</i>	Discusses potential diagnoses, differential diagnoses, and relevant neurobiological, psychological, or pharmacological mechanisms with accuracy	Discusses diagnosis and mechanism but the differential is thin or partly inaccurate	Mechanism missing, vague, or inaccurate

- **Case Report** (5% of your final grade) asks you to individually compare and contrast two case presentations from your classmates, delivered during the final weeks of the course; you may include your own presentation as one of the two. The goal is to listen closely, take careful notes, and think critically about how the cases relate to one another, applying your knowledge to new contexts and deepening your appreciation for the complexity of real clinical and neuroscientific issues. If your two cases seem quite different, ground the comparison in dimensions we've emphasized in class: underlying neural systems, symptom profiles, treatment approaches, or broader course themes. Still, you are strongly encouraged to review the class recordings/slides for both presentations as part of your preparation, don't rely solely on your in-class notes. Your report should be 2-3 pages (double-spaced) and include:
 - A brief summary of each presentation's central focus and key takeaways.
 - A comparison noting at least one meaningful similarity and one important difference, whether in symptoms, mechanisms, treatments, ethical concerns, broader implications, or (optionally) presentation style and delivery. Outside research isn't required, but outside sources are welcome if they strengthen your comparison; cite them in APA format.
 - A reflection on the larger insight this comparison reveals.

Your Case Report will be graded on the following rubric:

	Strong	Adequate	Needs Work
<i>Summary of each presentation</i>	Clear, accurate summary of both cases' central focus and key takeaways	Summarizes both cases but one is thin or slightly inaccurate	One or both summaries missing or inaccurate
<i>Quality of comparison</i>	Identifies at least one meaningful similarity and one important difference, well-supported	Identifies a similarity and difference, but support is thin	Comparison is superficial or missing an element
<i>Depth of reflection</i>	Draws a genuine, specific insight from putting the two cases side by side	Reflection present but fairly generic	Reflection missing or purely restates the comparison
<i>Writing and organization</i>	Clear, well-organized, appropriate length	Generally clear but could be tightened or better organized	Difficult to follow or well outside the expected length

- **Final Reflection** (10% of your final course grade) provides space to step back and evaluate what you learned in this course, including how well you met both the instructor's objectives and your own goals. Your reflection should be organized, go beyond simply parroting back course material verbatim, and include how some of the big lessons from this course could be applied to your education, personal life, and/or career going forward. While your submission should be a polished product, having been fine-tuned through careful editing, you are welcome to adopt a

format that reflects your own preferred style. You could, of course, format this as a standard written term paper, but you could instead produce a video, animation, comic book, podcast, website, or interpretive dance... OK, it might be hard to fulfill the requirements of this assignment through purely interpretive dance. But you do have pretty wide latitude here. If you're unsure as to whether your plan is appropriate, check with me. To give you a general guideline, your submission should be roughly equivalent to a 2-3 page (double-spaced, 11-or 12-point font) paper with reasonable margins. It is OK to submit a link to your reflection (if, e.g., you posted a video to Youtube or created a website); however, you should not continue to edit the material after the deadline (at least until I've had a chance to grade it).

- **Research Participation** (5% of your final grade) is a valuable way to get first-hand exposure to the variety of research conducted within the Psychology and Neuroscience programs. There will be a number of student and faculty research projects recruiting participants this semester. You are expected to be involved in the equivalent of 2 *credits* worth of participation or do an alternative assignment. Additional participation credits will be considered for Extra Credit (see below). A brief video overview of the participation credit system can be found at <https://youtu.be/foLi2deanR8>. Importantly:
 - You only get credit for participating in approved studies. All eligible studies are listed on <https://www.bates.edu/psychology/participate-in-research/student-participation/>. Participation in any experiment that is not included in that list of approved experiments will *not* count for credit.
 - It will take some time for research studies to be posted as students finalize their thesis experiments, so do not worry if you don't see any experiments posted right away. Keep checking the website every week or so, and things will pick up around mid-semester.
 - Each study has a fixed number of units assigned to it based on the average length of time that it will take to participate. Typically, 1 hour worth of participation is equal to 1 credit, with each quarter hour represented by 0.25 credits. Be sure to check the number of credits when you sign up for the experiment. If an experiment is worth 0.5 credits, for instance, you will get 0.5 credits whether it takes you 25 minutes or 35 minutes to complete it.
 - Please note the restrictions listed for each experiment and do *not* sign up for studies for which you are not eligible.
 - To sign up for an experiment, please follow the link to the online appointment scheduler for that project. Please be respectful of the experimenter's time and make sure that you *keep your appointment and arrive punctually*. If you are unable to keep your appointment, please notify the experimenter as soon as possible.
 - Please note that, for online studies in which your participation is entirely Internet-based, you will be given the experiment number and a code word for that study at the end of the survey. You will then be asked to enter that information in another web form in order

to get credit for the project (the separation is meant to maintain the confidentiality of your data). If you don't enter the correct experiment number and code word, you will not receive credit.

- If you would prefer to opt out of this research participation requirement (or if you're not eligible for any available studies), you may instead complete alternative assignments designed to familiarize you with the other side of research participation: running a study involving human participants. Specifically, you would be asked to summarize chapters from Ritter et al.'s (2012) "How to Run Experiments: A Practical Guide to Research with Human Participants." Each reasonable summary would yield the equivalent of 1 participation credit (i.e., you'd need to submit 2 solid summaries to earn 2 credits, participate in 2 credits worth of eligible research, or complete a combination of the two; note that no partial credit will be given for summaries). The goal is not to rewrite what has already been written; instead, you will be asked to summarize the chapter in another modality: *as a slideshow, as a video, or as a podcast*. Get creative—for instance, you could act out or sing a song about the dos and don'ts around interacting with participants. Further details for the "Research Participation Alternative Assignments" can be found under the "General" section at the top of our Lyceum page.
- For credit, you must have completed your research participation and/or alternative assignment(s) by 4pm on the last day classes are held for the semester—but don't wait until the last minute!
- **Engagement** (8% of your final grade) is critical for the success of this course. Your engagement grade reflects a holistic view of how you participate in our class community—through activities, discussions, and completion of in-class worksheets. Depending on how the semester unfolds, brief retrieval warm-ups at the start of select class sessions, drawing on material from previous quizzes, may also factor in here. Most of this work will be graded for completion rather than accuracy—i.e., if you put in a reasonable effort, you will receive full credit, even if your answers aren't perfect. Simply showing up to class is not the same as being engaged. Active engagement means being attentive, prepared, and contributing to the learning environment—whether that's through asking questions, sharing ideas, or collaborating with peers. The goal is to foster a classroom community where everyone is present, invested, and participating meaningfully.
- **Extra Credit** (up to 5 additional percentage points added to your final course grade)
 - **Additional research participation credits (or alternative assignments)** above the required 2 credits worth will be considered extra credit counted toward your final course grade (up to a maximum of 4 additional percentage points, 1 for each additional credit equivalent; e.g., an 88% becomes up to 92%). While research participation will be accepted in increments of .25 credits, there is no partial credit for the alternative

assignments; each satisfactory summary earns the equivalent of 1 credit (so don't try turning in half a summary and expect .5 credits ;-).

- Additionally, **completing each practice quiz in good faith** (attempting every question, not just clicking through; I need to be able to see your attempts on Lyceum to grant you credit) earns +0.2 percentage points toward your final grade, up to a maximum of +1 additional percentage point across all five practice quizzes. While the extra credit is a nice bonus, the real reason to do the practice quizzes is retrieval practice and getting familiar with the quiz format, both of which are likely to translate into better learning, and better quiz grades.

Grading Scale

A+	≥97%
A	93-96.99%
A-	90-92.99%
B+	87-89.99%
B	83-86.99%
B-	80-82.99%
C+	77-79.99%
C	73-76.99%
C-	70-72.99%
D+	67-69.99%
D	63-66.99%
D-	60-62.99%
F	<60%

You can easily calculate your current grade by inserting the assignments/quizzes, grades received, and weights (given above, in percentages) by hand or using this handy calculator: <https://www.rapidtables.com/calc/grade/grade-calculator.html>. Note that any extra credit should be added on *after* that calculation is performed.

Attendance

Your attendance and preparation are critical to your learning and, in turn, your grade in the course. As such, you are expected to attend each class having completed the assigned reading for the day. The more active your reading (by thinking deeply about the issues raised, connections to broader themes and examples, and identifying/answering questions arising) and engagement during class, the more you will be able to gain. So, even if I don't take formal attendance, it is to your advantage to be fully present and prepared in class on a regular basis.

Of course, I recognize that illness, serious family emergency, or other extenuating circumstances may sometimes keep you from attending class. Under normal circumstances (and classroom technology

permitting), lecture recordings will be provided online within 24 hours of each lecture for anyone who may have missed class for these reasons (or if you simply want to review the recording later, in combination with the lecture slides that will be posted to Lyceum). To access the recordings, click the "<" at the top-right corner of your Lyceum screen, click on the Kaltura Media Gallery link, and then select the lecture you would like to view. Be advised, however, that the recordings and slides do not capture the full in-class experience and should *not* be used as a substitute for attendance unless absolutely necessary. Recordings are for enrolled students only and may not be shared or reposted.

If you are going to miss more than one class in a row, please provide me with official notification from the Health Services, Counseling and Psychological Services, or the Office of Student Support and Community Standards. Again, you remain responsible for working with me to address missed work under these circumstances. For additional information on the Bates College policy regarding course attendance and student responsibilities in cases of expected and unexpected absence, please consult <https://www.bates.edu/dof/course-attendance-policy-guideline-for-absences/>.

All Bates students are expected to take the final examinations (or, in our case, final quizzes) at the time scheduled by the Registrar's office. Exceptions are made for students who have two exams at the same time or three exams in one day. Final examinations cannot be rescheduled to accommodate the travel plans of students. Students should not make any travel plans until they have full knowledge of their final examination schedule. For more information or to submit a request to move a final examination, please visit the college's policy on final exams (<https://www.bates.edu/accessible-education-student-support/request-to-move-a-final-examination/>).

Religious Holiday Observance

Bates recognizes the right of students to fulfill their religious obligations and practices. In recognition of Bates' commitment to a diverse and inclusive student body and the variety of religions observed and practiced by our students, I have consulted the Multifaith Calendars posted online by the Office of the Multifaith Chaplain when developing this syllabus so that conflicts between in class examinations and major religious holidays may be avoided. Given the range of faiths embraced by members of our community, however, it may not be possible to avoid all conflicts between scheduled examinations and religious holidays. *Please let me know within the first three weeks of the semester if there is a conflict between a scheduled examination, paper, or project due date and a significant religious holiday you observe.* The Office of Accessible Education will continue to be available to proctor makeup exams for students who miss an exam due to observance of a significant religious holiday.

Unforeseen Events

Should an unforeseen event (e.g., a weather emergency) force us to cancel class or alter the venue, I will inform you via the class email list as soon as possible. Please check your Bates email regularly, as important class-related communications will come through this channel.

Accessibility

Bates College is committed to creating a learning environment that meets the needs of its diverse student body. If you anticipate or experience any barriers to learning in this course, please feel welcome to discuss your concerns with me.

If you have a disability, or think you may have a disability, you may also want to meet with the Director of Accessible Education, to begin this conversation or request an official accommodation. You can find more information about the Office of Accessible Education and Student Support (AESS), including contact information, here: <https://www.bates.edu/accessible-education/>. Note that processing time for new accommodation requests is generally 2 weeks according to the AESS website. And, once approved, some types of accommodations may take several weeks to fulfill, so it is important to make the request as soon as possible. Once approved through the Office of Accessible Education, AESS will email me an official Letter of Accommodations (copying you). Although accommodations may be approved at any point in the semester, they are *not* retroactive.

Diversity and Inclusion

It is essential that our classroom be a place in which people feel comfortable expressing their thoughts, feelings, and opinions without fear of unduly critical or judgmental responses. Everyone in the classroom (students and instructors, alike) are expected to be respectful of the widely varied experiences and backgrounds represented by the classroom members as a group. Disrespect or discrimination on any basis will not be tolerated. Whether inside or outside the classroom, if you encounter sexual harassment, sexual violence, or discrimination based on race, color, religion, age, national origin, ancestry, sex, sexual orientation, gender identity/expression, or disability, you are encouraged to report it to Gwen Lexow, Director of Title IX and Civil Rights Compliance at Bates, at glexow@bates.edu or 207- 786-6445. Additionally, please remember that Bates faculty are concerned about your well-being and development, and we are available to discuss any concerns you have. Students should be aware that faculty are legally obligated to share disclosures of sexual violence, sexual harassment, relationship violence, and stalking with the college's Title IX Officer to help ensure that your safety and welfare are being addressed.

In-Class Electronic Device Policy

Although there are many benefits to taking handwritten notes and potential distractions associated with the use of devices like laptops, tablets, and phones in class (e.g., Mueller & Oppenheimer, 2014; Fried, 2008), you may still opt to use a laptop or tablet in this class *as long as it contributes to learning*. If it is seen to invite

distraction to you or others, however, you may be asked to refrain from using it in class. There will be some class sessions where we will use technology together, and in those instances, all students should make arrangements to bring a laptop or tablet to class (smartphones may not be suitable for some of these in-class activities). If you do not have access to such a device or have any questions or concerns, please email me so that we may find a suitable workaround. For example, the library has several Chromebooks available to check out to Bates students for 1-week loan (with a 1-week renewal). And students who don't own a laptop have the option of checking out a long-term loaner (either laptop or Chromebook) from the IT Service Desk.

Use of Course Materials and Recordings

In line with our shared values around Academic Integrity and Conduct as articulated in the Student Code of Conduct, the Dean of Faculty office reminds all students that screen capturing or making audio/video recordings of synchronous or asynchronous meetings, lectures, discussions, course materials, or other classroom activities without the prior knowledge and consent of all parties is prohibited. This applies to the use of tape or digital recorders, cell phones, smartphones, computers, and other devices capable of creating a screen capture or making audio/video recordings. Likewise, the editing, sharing, or use of recorded or digitally shared course content outside of their assigned or intended purpose is also prohibited. Students with disabilities who wish to record classroom activity should contact the Office of Accessible Education for information about appropriate protocols.

Academic Integrity

Academic integrity isn't just a policy—it's about building trust and fairness in our learning community. All members of the Bates community benefit from an environment of trust, honesty, fairness, respect, and responsibility. You are expected to present your own work and acknowledge the work of others in order to preserve the integrity of scholarship. Your academic work is governed by The Bates College Statement on Academic Integrity (<https://www.bates.edu/student-conduct-community-standards/student-conduct/academic-integrity-policy/>) and by any additional standards I set in this syllabus or in individual assignments.

Academic integrity includes:

- Following quiz/exam/assignment rules
- Using only permitted materials during a quiz/exam/assignment
- Viewing quiz/exam materials only when permitted by your instructor
- Keeping what you know about a quiz/exam to yourself
- Incorporating proper citation of all sources of information
- Submitting your own original work
- Not submitting work produced for another course—even if it is entirely your own—without prior, explicit permission from the instructor

Academic misconduct includes, but is not limited to, the following:

- Disclosing quiz/exam content during or after you have taken a quiz/exam
- Accessing quiz/exam materials without permission
- Copying/purchasing any material from another student, or from another source including generative Artificial Intelligence, that is submitted for grading as your own
- Plagiarism, including use of Internet material without proper citation
- Using cell phones or other electronics to obtain outside information during a quiz/exam or assignment without explicit permission from the instructor
- Submitting your own work in one class that was completed for another class (self-plagiarism) without prior permission from the instructor

Violations of academic integrity are serious and can result in severe consequences at both the course and College levels. Depending on the circumstances of the violation, I will assign a failing grade for the assignment and/or the course, require work to be redone, and/or impose other consequences; in addition, I will refer the matter to the Dean of Students for possible institutional action. The Bates College Statement on Academic Integrity and procedures for suspected violations can be found here: <http://www.bates.edu/student-affairs/student-conduct/academic-integrity-policy/>.

Use of Generative Artificial Intelligence (genAI)

Generative Artificial intelligence (genAI) tools (e.g., Gemini, ChatGPT, Copilot, Claude) can be powerful aids for brainstorming, fact-checking, and learning. However, AI must be used thoughtfully and responsibly in this course. Some assignments require a specific AI tool for a specific purpose (for example, Research in the Wild requires NotebookLM/Gemini Notebook for organizing your sources). Where an assignment's own instructions specify required or restricted AI use, follow those specific instructions rather than the general guidance below.

In general, you are expected to:

- Use genAI as a learning partner, not a shortcut: genAI can help clarify concepts or spark ideas, but it should not replace your own critical thinking, writing, or data analysis.
- Maintain academic integrity: Submitting AI-generated work as if it were your own original writing or analysis is *not* allowed. AI tools can make mistakes, fabricate references, and lack critical nuance—you are responsible for verifying all information.
- Be transparent: If you use AI to help generate ideas, outlines, or drafts, you must acknowledge it (e.g., "I used ChatGPT to brainstorm topic ideas for this assignment").

In general, you may use genAI for:

- Brainstorming and refining your ideas
- Fine tuning your research questions

- Finding information on your topic. General-purpose genAI tools (Gemini, ChatGPT, Claude, Copilot) can hallucinate, inventing facts or citations that sound plausible but aren't real, so always verify anything they tell you against a real source. Source-grounded tools like NotebookLM, which only draw on documents you upload, carry much less of that risk for the material you've given them, though they can still make mistakes.
- Drafting an outline to organize your thoughts
- Checking grammar and style
- Generate practice quiz questions or concept checks

The use of genAI tools is *not* permitted in this course for the following activities:

- On timed quizzes/exams for any purpose
- Submitting AI-written responses or analyses as your own (even if you introduce superficial changes to the writing)
- Using AI to generate citations or references without verifying their accuracy
- Relying on genAI to replace your own critical thinking or engagement with the material

Remember that *you* are responsible for any work you submit, and you may be asked to explain the points you raised in contexts that do not afford you the support of genAI (e.g., on a quiz/exam, in discussion).

Student Services

- **The Student Academic Support Center (SASC)** provides peer-led support for introductory and intermediate level courses in mathematics, statistics, programming, natural sciences, life sciences, and quantitative social sciences. Additionally, SASC provides support for students using a variety of quantitative skills required for courses across the curriculum. The Student Academic Support Center also provides a variety of workshops in quantitative skills, time management, note-taking, and study skills. Course-Attached Tutors (CATs) are embedded in courses with the highest demand for tutoring. CATs provide assistance outside of class in the form of weekly help sessions and private appointments. SASC is located in the Peer Learning Commons (PLC) on the Ground Floor of Ladd Library. Students are invited to stop by, without an appointment, to the drop-in hours in Ladd to meet with a tutor, study independently, meet up with classmates, or to discuss learning strategies. Students who wish to set up an individual appointment can discuss options with a Resource Representative at the PLC check-in desk. For more information go to www.bates.edu/sasc or email sasc@bates.edu.
- **The Student Writing & Language Center (SWLC)** empowers Bates students in becoming more effective writers, speakers, language-users, and language-learners. Tutors provide a supportive environment for you to understand and generate ideas for your writing assignments in any subject or course; to draft, revise, and edit your writing for any purpose, context, or audience; to practice and get feedback on your oral presentations; and to study or practice writing and

communicating. SWLC tutors are Bates students just like you, trained to listen to and guide you in using writing and language to achieve your personal and academic goals. Drop in to the SWLC anytime we're open to meet with a writing or language tutor. They're located in the Peer Learning Commons on the Ground Floor of Ladd Library. You can also search for subject-specific support hours or make appointments with a tutor using the Penji app: <https://web.penjiapp.com/>. For more information about the SWLC please visit www.bates.edu/swlc or email swlc@bates.edu.

- **Bates Counseling and Psychological Services (CAPS)** offers assistance and referral to address students' personal, social, career, and study skills needs. CAPS is located on the second floor of the Health Services Building (31 Campus Ave). You can contact them at 207-786-6200 for assistance M-F from 9:00 to 5:00 (out of hours emergency assistance can be obtained via Campus Security at 207-786-6254 or by calling 988). For additional information, see: <https://www.bates.edu/counseling-psychological-services/>. Services for students include:
 - Crisis and same-day emergency mental health consultations
 - Confidential assessment, counseling services (individual and small group), and referrals

Course Planning

This course requires you to spend a good amount of time outside of our class meetings reading, studying, completing major assignments, and otherwise preparing to participate fully and get the most out of the experience (and a commensurate grade). Federal guidelines specify that you spend at least 2 hours outside of class for every hour spent in class. With our schedule of 3 × 55-minute classes (2.75 hours per week), that alone would mean planning to spend at least 5–6 hours outside of class. But this is Bates, which has its own standard of 10–15 hours of academic work per week per course credit—that figure includes class time, meaning you should expect to spend roughly 7–12 hours per week outside of class doing the reading, assignments, studying, etc. Some weeks (e.g., before a quiz or major deadline) may require more of your time outside class, but if you plan in advance and commit to dedicating regular outside time to your studies each week, it will be more manageable, with fewer week-to-week fluctuations.



The material we cover in class and the types of assigned readings (which include peer-reviewed research articles) may be unfamiliar to many students and therefore take extra time to grasp fully. If you find you need to read the material slowly and multiple times, that's not a bad sign—it means you're putting in the effort required to succeed and retain the knowledge/skills for later (go you!). If you are worried about falling behind or want more advanced work, please email me and/or drop by office hours so we can discuss the way forward. I am happy to discuss study/reading strategies and/or find additional materials to support your journey through the course and toward your personal goals.

Prospective memory involves remembering to carry out some intended action in the future. There's no reason you can't take steps now to improve your ability to carry out the appropriate actions on time, even before we cover the topic. So please, please, please take the time to review all the deadlines provided in the schedule at the end of this syllabus. Transfer them to your personal calendar immediately (and add reminders). Doing so will help you avoid scheduling conflicts and allow you to carve out the necessary time to perform your best.

Additional Resources

There are treasure troves of information about neuroscience, psychology, and related disciplines sprinkled around the interwebs—much of it can be accessed for free. If you find yourself struggling to understand a concept, I'd encourage you to search around, carefully evaluate the quality of the sources, and share useful finds with the rest of the class. Below are some resources I have identified:

- APA formatting and general reference:
 - Purdue Online Writing Lab (OWL): https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_formatting_and_style_guide
 - I posted some additional reference materials inside the "APA Style/Scientific Paper Writing Tips" submodule inside of the "Course Introduction" of Lyceum.
 - Middlebury Library: <https://middlebury.libguides.com/citation/apa7>
 - ECU Library: <https://libguides.ecu.edu/c.php?g=982594&p=7463742>
 - Video Tutorials: <https://apastyle.apa.org/instructional-aids/tutorials-webinars>
 - APA Dictionary of Psychology: <https://dictionary.apa.org>
- Searchable article databases (and tutorials):
 - Neuroscience: <https://libguides.bates.edu/neuroscience>
 - Psychology: <https://libguides.bates.edu/psychology>
 - Psychology Resources: <https://www.bates.edu/psychology/resources-for-students/technical-resources/>
 - APA Database Tutorials: <https://www.apa.org/pubs/databases/training/tutorials>
 - Google Scholar: <https://scholar.google.com>
- Free textbooks & related resources:
 - Neuroscience/Biological Psychology/Medical Psychology:
 - Introduction to Neuroscience (Hutchins): <https://uen.pressbooks.pub/introneuro/>
 - Introduction to Neuroscience (Hedges): <https://openbooks.lib.msu.edu/introneuroscience1/>
 - Interdisciplinary Explorations of Neuroscience (May): <https://opentextbooks.rug.nl/interdisciplinaryexplorationsofneuroscience/>
 - Open Neuroscience Initiative (Lim): https://drive.google.com/file/d/1n08qgzhG5-RgkoqL_Aa4y1UBSycUcy5g/view

- Neuroscience Online: <https://nba.uth.tmc.edu/neuroscience/toc.htm>
- Neuroanatomy Online: <https://nba.uth.tmc.edu/neuroanatomy/index.html>
- Neuroscience (Ju): [https://med.libretexts.org/Bookshelves/Pharmacology_and_Neuroscience/Neuroscience_\(Ju\)](https://med.libretexts.org/Bookshelves/Pharmacology_and_Neuroscience/Neuroscience_(Ju))
- Foundations of Neuroscience (Henley): [https://med.libretexts.org/Bookshelves/Pharmacology_and_Neuroscience/Foundations_of_Neuroscience_\(Henley\)](https://med.libretexts.org/Bookshelves/Pharmacology_and_Neuroscience/Foundations_of_Neuroscience_(Henley))
- Psychology as a Biological Science (Lindberg): <https://nobaproject.com/textbooks/psychology-as-a-biological-science>
- Biological Psychology (Hove & Martinez): <https://open.umn.edu/opentextbooks/textbooks/biological-psychology>
- Introduction to Biological Psychology (Hall): [https://socialsci.libretexts.org/Bookshelves/Psychology/Biological_Psychology/Introduction_to_Biological_Psychology_\(Hall_Ed.\)](https://socialsci.libretexts.org/Bookshelves/Psychology/Biological_Psychology/Introduction_to_Biological_Psychology_(Hall_Ed.))
- Biological Psychology (Keys): [https://socialsci.libretexts.org/Courses/Sacramento_City_College/Psyc_310:_Biological_Psychology_\(Keys\)](https://socialsci.libretexts.org/Courses/Sacramento_City_College/Psyc_310:_Biological_Psychology_(Keys))
- The Nervous System in Action (Mann): <https://michaeldmann.net/The%20Nervous%20System%20In%20Action.html>
- Neuroscience for Pre-Clinical Students (<https://open.umn.edu/opentextbooks/textbooks/neuroscience-for-pre-clinical-students>)
- Computational Cog Neuro (O'Reilly et al.): <https://compcogneuro.org/>
- Science of Sleep (Shook): <https://open.umn.edu/opentextbooks/textbooks/the-science-of-sleep>
- Society for Neuroscience's Brain Facts: <https://www.brainfacts.org/>
- Research methods:
 - Crump et al.: <https://crumplab.github.io/ResearchMethods/index.html>
 - Cuttler et al.: <https://open.umn.edu/opentextbooks/textbooks/75>
 - University of Minnesota: <https://open.lib.umn.edu/psychologyresearchmethods/>
 - Bhattacharjee: https://scholarcommons.usf.edu/oa_textbooks/3/
- Statistics:
 - De Anza: <https://openstax.org/details/introductory-statistics>
 - Saylor: https://saylordotorg.github.io/text_introductory-statistics/index.html
 - Brown University Statistics Visualizations: <https://seeing-theory.brown.edu>
 - VassarStats: <http://vassarstats.net>
 - Effect Size Calculator: https://katherinemwood.shinyapps.io/lakens_effect_sizes/
 - Jamovi Open Stats: <https://www.jamovi.org>
 - Power analysis guide using G*Power: https://www.psychologie.hhu.de/fileadmin/redaktion/Fakultaeten/Mathematisch-Naturwissenschaftliche_Fakultaet/Psychologie/AAP/gpower/GPowerManual.pdf

- Help choosing an appropriate statistical test:
 - <http://www.statsflowchart.co.uk>
 - <https://stats.idre.ucla.edu/other/mult-pkg/whatstat/>
 - <https://www.statstutor.ac.uk/resources/uploaded/tutorsquickguidetostatistics.pdf>
- Cognitive neuroscience methods/tools:
 - Functional Neuroimaging: <https://imaging.mrc-cbu.cam.ac.uk/imaging/Cbulmaging>
 - FSL fMRI Analysis (free, multi-platform software and tutorials):
 - <https://fsl.fmrib.ox.ac.uk/fsl/fslwiki>
 - https://open.win.ox.ac.uk/pages/fslcourse/website/online_materials.html
 - Brain viewers:
 - Allen Brain Atlas: http://human.brain-map.org/mri_viewer
 - Gallant Lab: <https://gallantlab.org/brain-viewers/>
 - Neurosynth: <https://neurosynth.org/>
 - Event-related potentials (ERPs): <https://erpinf.org>
 - Neurofeedback: Open-source Python/Matlab framework (OpenNFT): <http://opennft.org/>
- Videos:
 - 2-Minute Neuroscience: <https://www.youtube.com/channel/UCUgZq9PkDp1xaEivtcfJPSg>
 - Nancy's Brain Talks: <https://nancysbraintalks.mit.edu/>
 - TED Studies: <https://www.ted.com/read/ted-studies/neuroscience>
 - Khan Academy: <https://www.khanacademy.org/test-prep/mcat/behavior#concept-intro>
 - HarvardX Neuroscience: <https://vimeo.com/mcb80x>
 - Programming resources for neuroscience/psychology: <https://occtive.github.io/www/library>
- Effective studying:
 - <https://www.samford.edu/departments/academic-success-center/how-to-study>
- Neuropsychiatric conditions:
 - A list of more than 400 neurological disorders from the National Institute of Neurological Disorders and Stroke can be found here: <https://www.brainfacts.org/diseases-and-disorders/neurological-disorders-az>
 - The Diagnostic and Statistical Manual of Mental Disorders (DSM-5-TR) is available for reference at the Ladd Library (RC455.2.C4 A48 2022)
- How-to guides for writing case reports:
 - <https://portal.clas.ufl.edu/writing--wdkb-v1/discipline/writing-psych-case-reports/>
 - https://www.fmhs.auckland.ac.nz/assets/fmhs/som/psychmed/docs/writing_a_psychiatry_case_study.pdf

- <https://jmedicalcasereports.biomedcentral.com/articles/10.1186/s13256-016-0867-x>
- <https://www.care-statement.org/checklist>
- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9999217/>
- Example case reports:
 - <https://www.tandfonline.com/action/showOpenAccess?journalCode=nncs20>
 - <https://practicalneurology.com/resources/case-reports>
 - <https://karger.com/crn/issue/16/1>
 - <https://onlinelibrary.wiley.com/journal/1604>
 - Many more can be found running the relevant PsychInfo, PubMed, or Google Scholar search

About the Instructor

Well, hello there! I'm excited to be your instructor for this course. In case you're wondering who's lecturing excitedly about action potentials and cats multiple times a week, here's a bit about me (I'll save you the trouble of Googling since your coursework will likely keep you busy enough). I joined Bates College in 2024 after spending nine years at Bard College, where I served as chair of the Psychology Program (I'm now chair of the Neuroscience Program at Bates). My background is in psychology, with a focus on the cognitive neuroscience of human memory—especially the fascinating (and often misunderstood) process of forgetting. I earned my bachelor's degree from the University of Pennsylvania in 2005 on full scholarship, completing two theses: one on memory consolidation during sleep and another on how children learn mentalizing verbs like "to think." While at Penn, I also worked as a wedding videographer and held several research positions, including clinical research at the Children's Hospital of Philadelphia. My path through graduate school was quite the adventure—both literally and figuratively (ask me about it sometime!). I received my Ph.D. from the University of Cambridge, where I was affiliated with St John's College and the Medical Research Council's Cognition and Brain Sciences Unit. Afterward, I returned to New Jersey (where I grew up) for a postdoc at the Princeton Neuroscience Institute (I didn't actually grow up *in* the Institute) before joining the faculty at Bard. It was in Princeton that I found my two cats, Mandy and Jerri (sisters from the same litter). They quickly became my inspirations, portable space heaters, and sage meditation teachers. Two more tidbits about me: I have aphantasia and severely deficient autobiographical memory (SDAM)—conditions that are only starting to be explored in neuroscience. Regardless, I have no doubt that we'll find ways to make this semester memorable for everyone!

Tentative Course Schedule

Week	Date	#	Topic	Readings/Viewings/ Listeenings (come prepared for class)	Assignments
1	9/2 (w)	1	Course Introduction		By 11:59pm tonight have completed the Getting-to-know-you Google Form : https://forms.gle/WK9N7wDFEWR4446W9
	9/4 (f)	2	Functional Neuroanatomy & Case Studies	• Have read (by class today): • Syllabus • Chapter 1 • <i>Optional (& useful!!!) reading:</i> • Putnam et al. (2016)—on Lyceum	
2	9/7 (m)	3	Fun with Brains	• Have read: • Chapter 2	
	9/9 (w)	4	The Many Faces of Blindness		
	9/11 (f)	5	Visual Pathways (Part 1)	• Have read: • Chapter 6, Sections 6.1-6.3	
3	9/14 (m)	6	Visual Pathways (Part 2)	• Have read: • Chapter 6, Sections 6.4-6.5 • Quiroga et al. (2005)—on Lyceum	
	9/16 (w)	7	Resting Membrane Potential ▶ Quiz #1 study guide & practice quiz released	• Have read: • Chapter 3, Section 3.1	
	9/18 (f)	8	Action Potential (Part 1)	• Have read: • Chapter 3, Section 3.2	
4	9/21 (m)	9	Action Potential (Part 2)		

Week	Date	#	Topic	Readings/Viewings/ Listeenings (come prepared for class)	Assignments
	9/23 (w)	10	Quiz #1		
	9/25 (f)	11	Synaptic Transmission	- Have read: - Chapter 3, Sections 3.3-3.6	
5	9/28 (m)	12	Psychopharmacology and Addiction	- Have read: - Chapter 14 - Chapter 15, Section 15.1	
	9/30 (w)	13	Pain	- Have read: - Chapter 8, Section 8.2	
	10/2 (f)	14	Neuromuscular Disorders ▶ Quiz #2 study guide & practice quiz released	- Have read: - Chapter 8, Sections 8.6-8.7	
6	10/5 (m)	15	Motor Movement	- Have read: - Chapter 8, Sections 8.3-8.5	
	10/7 (w)	16	Quiz #2		
	10/9 (f)	17	Stress & Trauma (Part 1)	- Have read: - Chapter 12, Section 12.3	
7	10/12 (m)	18	Stress & Trauma (Part 2)		
	10/14 (w)	--	NO CLASS / FALL BREAK		
	10/16 (f)	--	NO CLASS / FALL BREAK		
8	10/19 (m)	19	Amnesia	- Have read: - Chapter 13, Sections 13.3; 13.6-13.7	
	10/21 (w)	20	Memory Consolidation	- Have read: - Chapter 13, Sections 13.4-13.5	By 11:59pm tonight have submitted Research in the Wild

Week	Date	#	Topic	Readings/Viewings/ Listenings (come prepared for class)	Assignments
9	10/23 (f)	21	Mission: PTSD Intervention Panel	- Have watched: 16-minute video: https://youtu.be/ZK7ih4V0erc?si=OST1N-UwLh_R0mEM 8-minute video: https://youtu.be/GgCPnFQPs-k?si=svt9NZTgj7FbywCB	By 11:59pm tonight have completed the Lyceum Course Feedback survey (anonymous)
	10/26 (m)	22	Alzheimer's Disease ▶ Course feedback results discussed ▶ Quiz #3 study guide & practice quiz released	- Have read: - Chapter 16, Sections 16.2	
	10/28 (w)	23	Mission: Alzheimer's Policy Brief		
	10/30 (f)	24	Brain Injuries ▶ Debate teams formed	- Have read: - Chapter 16, Sections 16.5-16.8	
10	11/2 (m)	25	Quiz #3		
	11/4 (w)	26	Debate 1: The Future of Football		
	11/6 (f)	27	Depression & Bipolar Disorders ▶ Debate teams formed	- Have read: - Chapter 15, Sections 15.3; 15.5	

Week	Date	#	Topic	Readings/Viewings/ Listeenings (come prepared for class)	Assignments
11	11/9 (m)	28	Debate 2: Psychedelic Medicine	- Have listened to/ watched: 46-min podcast: https://podcasts.apple.com/us/podcast/intelligence-squared/id708371900?i=1000447014730	
	11/11 (w)	29	Sleep ► Quiz #4 study guide & practice quiz released	- Have read: - Chapter 9	
12	11/13 (f)	30	Schizophrenia ► Case Study groups formed/topics assigned	- Have read: - Chapter 16, Sections 16.1; 16.10	
	11/16 (m)	31	Quiz #4		
	11/18 (w)	32	Mission: Dream Research Proposal	- Have read: - Shook (2022, <i>Science of Sleep</i>) "Dreams"	
	11/20 (f)	33	Brain Lateralization ► Quiz #5 study guide & practice quiz released	- Have read: - Chapter 7, Sections 7.6-7.7 - Have watched: 18-min video: https://www.ted.com/talks/jill_bolte_taylor_my_stroke_of_insight	By 11:59pm tonight have submitted Final Reflection
	11/23 (m)	--	NO CLASS / THANKSGIVING		
	11/25 (w)	--	NO CLASS / THANKSGIVING		

Week	Date	#	Topic	Readings/Viewings/ Listeenings (come prepared for class)	Assignments
	11/27 (f)	--	NO CLASS / THANKSGIVING		
14	11/30 (m)	34	Case Study Final Prep ▶ ROLE survey		
	12/2 (w)	35	Case Study Presentations 1		Have a designated group member upload your Presentation slides to Lyceum by 9:00am on your presentation day
	12/4 (f)	36	Case Study Presentations 2 ▶ All presentation slides posted to Lyceum after class		Have a designated group member upload your Presentation slides to Lyceum by 9:00am on your presentation day By 4:00pm today have completed Research Participation or submitted to Lyceum Alternative Assignments (including Extra Credit)
	12/7 (m)	--	NO CLASS / EXAM WEEK		
	12/9 (w)	--	NO CLASS / EXAM WEEK		
	12/11 (f)	--	NO CLASS / EXAM WEEK		
	12/14 (m)	38	Cumulative Quiz #5 (during final exam period in Carnegie 113) from 3:45-4:40pm <i>Possible Case Study Presentation spillover (from 5:00-5:45)</i>		By 4:00pm today have submitted Case Report

Schedule is subject to change to improve pacing and/or accommodate unforeseen events (e.g., severe weather, pandemic, alien abduction). Check announcements over email.