Psychology 139J: Forgetting
University of California, Santa Cruz
Summer 2023

Class Meetings: June 26th – July 28th, 2023

  Times: Tuesdays and Thursdays, 9:00am - 12:30pm
  Location: N. Sci Annex 103

Professor: Benjamin C. Storm, Ph.D.

  Office Hours: Tuesdays 1-2, and by apt.
  Office Location: SS2, Room 345
  Email: storm@ucsc.edu
  Phone: (831) 459-3544

  Office hours will be held in person (SS2, Room 345). By appointment, I will also be
  available to meet remotely at the following zoom link:

  https://ucsc.zoom.us/j/98267309906?pwd=TVhyTGRNam4yQkhkZGdXSWVpaTNmUT09

Basic Information:

  The goal of the course will be to explore the mechanisms of forgetting and the essential
  role of forgetting in the adaptive functioning of human memory. Evaluations will be
  based on attendance/participation, presentations, a multiple-choice exam, and a research
  proposal writing assignment. Enrollment is restricted to senior psychology and
  cognitive science majors who have successfully completed Psych 100.

  Although not formal prerequisites, the course is designed to build on the successful
  completion of previous coursework related to memory and cognition (e.g., Psych 20,
  Psych 129). Each class will involve active discussion and a critical examination of
  theories, phenomena, and issues related to human memory. Assigned readings are
  available on Canvas.

  Students should expect to work 20 hours per week during the 5-week session. First, in
  person attendance is required. Second, there will be several reading assignments for
  each class period. Third, in addition to the assigned readings, students will need to find
  and read numerous articles related to their paper topic. Fourth, students will write a
  formal research proposal, which will require considerable time to be drafted, revised,
  and completed. Fifth, students will make two class presentations. Finally, there will also
  be an in-person multiple-choice exam.

  Students are expected to attend every class session, show up on time, and actively
  participate in discussion. Missing one class session is the equivalent of missing an entire
  week during the academic year. You may be asked to share your work with others for
  peer review and feedback. Such exercises provide valuable learning opportunities, but
  please talk to the professor if this is something with which you would be uncomfortable.

Assignments and Sources of Evaluation:

Attendance/Participation (10%). Students are expected to attend every class session, show up on time, and actively participate in discussion. Up to 3% will be deducted per class session if you are absent, arrive late, or leave early without a valid excuse. Email the professor as soon as possible if you know you are going to be late or unable to attend (you do not need to provide evidence or documentation). Note that a maximum of two absences can be excused during the 5-week session, a policy that is designed to cover contingencies such as illnesses, family emergencies, etc. Students will be expected to make up for any missed work.

IMPORTANT: Students who do not attend the first day of class or who do not meet the prerequisites will be dropped.

Discussion Points/Questions (10%). Students are expected to submit one discussion point/question for at least 10 of the required readings listed on the syllabus. To receive credit, the discussion points/questions must be submitted on canvas no later than 11:59 pm on the night before the upcoming lecture. The goal is to be thought provoking, to share your perspective, and to get others in the class thinking. What do you think about the conclusions? What are the open questions that need to be addressed? Are there any flaws in logic or misinterpretations? How do the ideas connect to your life or society at large? What are the larger implications? What is the paper missing? Each discussion point/question should be approximately 2 to 4 sentences. Try to contribute something new, be creative, speculate, intersect, reconsider, and challenge assumptions. The points/questions will be made available to the class anonymously, so please only include points/questions that you would be comfortable sharing.

Article Presentation (10%). Each student will be asked to give a presentation during one of the class meetings (15 minutes). The presentations should cover an empirical article related to that day's topic. It will be up to you to find an empirical article that you would like to present. The goal will be to explain what was done, why it was done, and what the results tell us about the topic under investigation. Most importantly, the presentation should communicate the methods and results of the study clearly and in a way that is accessible to others in the class, inviting the audience to discuss potential implications and limitations.

Multiple-Choice Exam (20%). There will be a single 60-min multiple-choice exam administered at 11 am on Tuesday, July 25. The exam will focus on the material covered in class discussions and the readings. Students will be allowed to use their hand-written notes, but they are not allowed to use their computers, phones, or photocopies of actual articles.

Research Proposal (40%). For the proposal assignment, students will develop a new research idea and write an APA style research proposal (as might be prepared for a manuscript or grant proposal). The proposal must build upon one of the five topics, focusing on the causes, consequences, and or implications of forgetting.

Detailed instructions and an extensive writing guide are available on canvas. Please read these instructions carefully. In total, the paper should be 9 pages long, double-spaced, and written in 12-point Times New Roman font.

For the proposal assignment, you might try to extend a published finding, explicate the boundary conditions of an empirical phenomenon, or test the assumptions of a theoretical account. Your goal is to design a study that is appropriate for answering a specific research question. This may involve designing an experiment, constructing a survey, or developing another methodological approach. Typically, the simpler and more focused the study, the better. Most importantly, the study must connect to one of the topics being covered in the class. If you have questions about this, please talk to the professor.

The preliminary proposal is due by 11:59 pm on Friday, July 14 (10%)
The final proposal is due by 11:59 pm on Thursday, July 27 (30%).

You can think of the final proposal as a revised and resubmitted version of the preliminary proposal. When writing your final proposal, you will be expected to revise your preliminary paper substantially. This will include responding carefully and thoughtfully to the feedback you receive on your preliminary paper and incorporating new information you learn in class and in the readings. Late papers will be accepted, but 10% of your grade will be deducted for each day they are late.

A draft version of the final paper will be due by the start of lecture on Tuesday, July 25. You will need to bring a printed version of your paper to class to share as part of a peer review exercise.

Proposal Presentation (10%). Each student will present their final paper in class on July 27 in the form of an oral presentation (10 minutes). More information about the proposal presentation will be provided in class.

Grading Scale:

98-100% = A+	88-89.9% = B+	78-79.9% = C+	62-67.9% = D
92-97.9% = A	82-87.9% = B	70-77.9% = C	60-61.9% = D-
90-91.9% = A-	80-81.9% = B-	68-69.9% = D+	0-59.9% = F

Important Summer Session 2023 Deadlines:

Add: Thursday, June 29
Drop: Monday, July 3
Request "W" Grade: Sunday, July 16 (no tuition reversal)
Change Grade Option: Sunday, July 23

For all dates and deadlines: https://summer.ucsc.edu/studentlife/index.html

For questions about dropping, requesting a W grade for a course, or withdrawing from the summer quarter, email summer@ucsc.edu.

DRC Remote Accommodations:

UC Santa Cruz is committed to creating an academic environment that supports its diverse student body. If you are a student with a disability who requires accommodations to achieve equal access in this course, please affiliate with the DRC. I encourage all students to benefit from learning more about DRC services to contact DRC by phone at 831-459-2089 or by email at drc@ucsc.edu. For students already affiliated, make sure that you have requested Academic Access Letters, where you intend to use accommodations. You can also request to meet privately with me. I would be happy to discuss how we can implement your accommodations in this course to ensure your access and full engagement in this course.

Academic Integrity

All members of the UCSC 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.

Academic integrity includes:
- Following exam rules and using only permitted materials during an exam
- Keeping what you know about an exam to yourself
- Incorporating proper citation of all sources of information
- Submitting your own original work

Academic misconduct includes, but is not limited to, the following:
- Accessing exam materials without permission, or disclosing exam content during or after you have taken an exam
- Copying/purchasing any material from another student, or from another source, 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 an exam 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 the Academic Integrity policy can result in dismissal from the university and a permanent notation on a student's transcript. For the full policy and disciplinary procedures on academic dishonesty, refer to the Academic Misconduct page at the Division of Undergraduate Education. Note that AI chatbots like Bard and ChatGPT will use text from sources without citation. If you include such text as your own writing, it will be considered plagiarism.

Distribution of Course Materials (Lecture Notes, Slides, Videos, Quizzes, etc.)

The materials in this course are the intellectual property of their creators. As a student, you have access to many of the materials in the course for the purpose of learning, engaging with your peers, completing assignments, etc. You have a moral and legal obligation to respect the rights of others by only using course materials for purposes associated with the course. For instance, you are not permitted to share, upload, stream, sell, republish, share the login information for, or otherwise disseminate any of the course materials, such as: video and audio files, assignment prompts, slides, notes, syllabus, simulations, datasets, discussion threads. Conversely, any materials created solely by you (e.g., your videos, essays, images, audio files, annotations, notes) are your intellectual property and you may use them as you wish.

Title IX / Care Advisory

The Title IX Office is committed to fostering a campus climate in which members of our community are protected from all forms of sex discrimination, including sexual harassment, sexual violence, and gender-based harassment and discrimination. Title IX is a neutral office committed to safety, fairness, trauma-informed practices, and due process.

Title IX prohibits gender discrimination, including sexual harassment, domestic and dating violence, sexual assault, and stalking. If you have experienced sexual harassment or sexual violence, you can receive confidential support and advocacy at the Campus Advocacy Resources & Education (CARE) Office by calling 831-502-2273. In addition, Counseling & Psychological Services (CAPS) can provide confidential, counseling support, 831-459-2628. You can also report gender discrimination directly to the University's Title IX Office, 831-459-2462. Reports to law enforcement can be made to UCPD, 831-459-2231 ext. 1. For emergencies call 911.

Principles of Community

The University of California, Santa Cruz expressly prohibits students from engaging in conduct constituting unlawful discrimination, harassment, or bias. I am committed to providing an atmosphere for learning that respects diversity and supports inclusivity. We need to work together to build this community of learning.

I ask all members of this class to be open to and interested in the views of others, consider the possibility that your views may change over the course of the term, be aware that this course asks you to reconsider some "common sense" notions you may hold, honor the unique life experiences of your colleagues, appreciate the opportunity that we have to learn from each other, listen to each other's opinions and communicate in a respectful manner, keep confidential discussions that the community has of a personal (or professional) nature, and ground your comments in the texts we are studying.

Basic Needs, Counseling, and Psychological Services

Counseling and Psychological Services. Many students at UCSC face personal challenges or have psychological needs that may interfere with their academic progress, social development, or emotional wellbeing. The university offers a variety of confidential services to help you through difficult times, including individual and group counseling, crisis intervention, consultations, online chats, and mental health screenings. These services are provided by staff who welcome all students and embrace a philosophy respectful of clients' cultural and religious backgrounds, and sensitive to differences in race, ability, gender identity and sexual orientation.

https://caps.ucsc.edu/

Slug Support Program. College can be a challenging time for students and during times of stress it is not always easy to find the help you need. Slug Support can give help with everything from basic needs (housing, food, or financial insecurity) to getting the technology you need during remote instruction.

To get started with SLUG Support, please contact the Dean of Students Office at 831-459-4446 or you may send us an email at deanofstudents@ucsc.edu.

<p style="text-align:center">Schedule of topics and papers:</p>
<p style="text-align:center">*required</p>

June 27-29: Introduction to the Class and to Research on Remembering and Forgetting

*Rajaram, S., & Barber, S. J. (2008). Retrieval processes in memory. In H. L. Roediger, III (Ed.), Cognitive psychology of memory. Vol. 2 of Learning and memory: A comprehensive reference (pp. 261-283). Oxford, UK: Elsevier.

*Schacter, D. L. (1999). The seven sins of memory: Insights from psychology and cognitive neuroscience. *American Psychologist, 54*, 182-203.

*Storm, B. C. (2018). Measures of forgetting. In H. Otani & B. L. Schwartz (Eds.), *Handbook of Research Methods in Human Memory* (pp. 36-49). Routledge.

Shrout, P. E., & Rodgers, J. L. (2018). Psychology, science, and knowledge construction: Broadening perspectives from the replication crisis. *Annual Review of Psychology, 69*, 487-510.

Gutchess, A., & Rajaram, S. (2023). Consideration of culture in cognition: How we can enrich methodology and theory. *Psychonomic Bulletin & Review, 30,* 914-931.

July 4 – Holiday

July 6 – Memory and Metamemory Considerations in the Science of Learning

*Bjork, R. A., Dunlosky, J., & Kornell, N. (2013). Self-regulated learning: Beliefs, techniques, and illusions. *Annual Review of Psychology, 64,* 417-444. (required)

*Overoye, A. L., & Storm, B. C. (2015). Harnessing the power of uncertainty to enhance learning. *Translational Issues in Psychological Science, 1,* 140-148. (required)

*Putnam, A. L., Sungkhasettee, V. W., & Roediger, H. L. (2016). Optimizing learning in college: Tips from cognitive psychology. *Perspectives on Psychological Science, 11,* 652-660.

Koriat, A. (2000). The feeling of knowing: Some metatheoretical implications for consciousness and control. *Consciousness and Cognition, 9*, 149-171.

Pashler, H., McDaniel, M., Rohrer, D., & Bjork, R. (2009). Learning styles: Concepts and evidence. *Psychological Science in the Public Interest, 9,* 105-119.

July 11 – False Memories and the Constructive Nature of Human Memory

*Conway, M. A., & Loveday, C. (2015). Remembering, imagining, false memories & personal meanings. *Consciousness and Cognition, 33,* 574-581.

*Newman, E. J., & Lindsay, D. S. (2009). False memories: What the hell are they for? *Applied Cognitive Psychology, 23,* 1105-1121.

*Schacter, D. L. (2012). Constructive memory: Past and future. *Dialogues in Clinical Neuroscience, 14*, 7-18.

Marsh, E. J., & Wang, B. W. (2018). Believing things that are not true: A cognitive science perspective on misinformation. In B. Southwell (Ed.), *Misinformation and Mass Audiences.* University of Texas Press.

Wixted, J. T., Mickes, L., & Fisher, R. P. (2018). Rethinking the reliability of eyewitness memory. *Perspectives on Psychological Science, 13,* 324-335.

July 13 – Voluntary and Involuntary Suppression of Thoughts and Memories

*Anderson, M. C., & Levy, B. J. (2009). Suppressing unwanted thoughts. *Current Directions in Psychological Science, 18,* 189-194.

*Storm, B. C. (2011). The benefit of forgetting in thinking and remembering. *Current Directions in Psychological Science, 20,* 291-295.

*Wegner, D. M. (1994). Ironic processes of mental control. *Psychological Review, 101,* 34-52.

Anderson, M. C., & Hulbert, J. C. (2021). Active forgetting: Adaptation of memory by prefrontal cortex. *Annual Review of Psychology, 72,* 1-36.

Kuhl, B. A., & Wagner, A. D. (2009). Forgetting and retrieval. In G. G. Berntson & J. T. Cacioppo (Eds.), *Handbook of neuroscience for the behavioral sciences, 1,* 586-605.

July 18 – Reconsolidation, Flashbulb Memories, and Some Interesting Cases of Remembering

*Elsey, J., & Kindt, M. (2016). Manipulating human memory through reconsolidation: Ethical implications of a new therapeutic approach. *AJOB Neuroscience, 7,* 225-236.

*Hirst, W., & Phelps, E. A. (2016). Flashbulb memories. *Current Directions in Psychological Science, 25,* 36-41.

*LePort, A. K. R., Stark, S. M., McGaugh, J. L., & Stark, C. E. L. (2017). Highly superior autobiographical memory: Quality and quantity of retention over time. *Frontiers in Psychology, 6,* 1-10.

Brown, A. S. (2003). A review of the déjà vu experience. *Psychological Bulletin, 129,* 394-413.

Lane, R. D., Ryan, L., Nadel, L., & Greenberg, L. (2015). Memory reconsolidation, emotional arousal, and the process of change in psychotherapy: New insights from brain science. *Behavioral and Brain Sciences, 38,* e1.

July 20 – Remembering and Forgetting in the Digital Age

*Firth, J., Torous, J., Stubbs, B., Firth, J., A., Steiner, G. Z., Smith, L., Alvarez-Jimenez, M., Gleeson, J., Vancampfort, D., Armitage, C. J., & Sarris, J. (2020). The "online brain": How the Internet may be changing our cognition. *World Psychiatry, 18,* 119-129.

*Marsh, E. J., Rajaram, S. (2019). The digital expansion of the mind: Implications of Internet usage for memory and cognition. *Journal of Applied Research in Memory and Cognition, 8,* 1-14.

*Storm, B. C., & Soares, J. S. (2023). Memory in the digital age. To appear in the Oxford Handbook of Memory.

Heersmink, R., & Sutton, J. (2020). Cognition and the web: Extended, transactive, or scaffolded? *Erkenntnis, 85,* 139-164.

Kozyreva, A., Wineburg, S., Lewandowsky, S., Hertwig, R. (2023). Critical ignoring as a core competence for digital citizens. *Current Directions in Psychological Science, 32,* 81-88.

July 25 –Final Proposal Drafts Due, Peer-Review Writing Workshop, Multiple-Choice Exam

July 27 – Final Presentations