
Myths and Truths in Psychology / PSYCH 209H

Spring 2023

TuTh 8:30-9:45 PM
Location: Elm Room 230

Instructor:

Prof. <PROF_FULL_NAME>
Email: <PROF_EMAIL>
Office: Tobin 414
Office hours: By appointment

Course Description:

Unlike some other scientific fields, we all have some naïve understanding about psychology, perhaps because we think we know ourselves quite well. For example, one without expertise in chemistry can only guess what happens if she/he mixes hydrogen peroxide with dishwashing detergent and yeast, but one without expertise in psychology may easily conclude that listening to music while studying boosts attention and therefore improves performance. However, much of what we believe to be true about ourselves and the human nature is very often false. And believing these myths as truths is costly in many sense.

This course examines *myths* or widely accepted beliefs in psychology and analyzes the extent to which they are true or false. We will use evidence-based scientific reasoning to support or to refute the myths with an aim to have a better understanding of the human mind and brain. While doing so, we make a distinction between phenomenon (description) and mechanism (explanation) and strive to have a mechanistic explanation for a phenomenon which will help maintain a critical view on the common sense. Learning will be based on discussions and writing assignments as well as on a team-based term project conducting a psychological experiment.

This course has many of the **General Education** (SB; Social and Behavioral Sciences) learning objectives, including (1) tackling fundamental questions about the human nature, (2) fostering critical thinking skills via hands-on problem-solving activities, (3) communicating effectively verbally and in writing, and (4) applying psychological perspectives and research methods to analyze real world issues.

In addition, as a **4-credit, honors** course the expectations for student's effort and performance will be higher than that of most other courses. Specifically, with a decent amount of workload, (1) students will be expected to think deeply and independently and synthesize ideas from various disciplines and perspectives, (2) students will conduct an empirical research activity as a class project, and (3) students will integrate the material covered in class with their own experience or knowledge acquired from other sources and activities.

Course Goals:

This course embraces four general goals aligned with the Gen Ed curriculum:

- (1) Content goal: Students will learn about various topics and ideas across many sub-disciplines within psychology. As the course is centered on discussing ideas prevalent to the general public, the content will be approachable to a large range of students with a diverse background.
- (2) Critical thinking goal: Every myth that will be discussed in class is controversial. Thus, students will be encouraged to be critical in evaluating the truthfulness (or mythfulness) of the claim by actively consulting with primary source articles and evidence-based resources.

- (3) Communication goal: Students will learn to express themselves effectively in oral presentations and writing assignments. Writing a summary statement after each class will foster skills to summarize contents in a succinct manner. Writing a literature review and project report will foster skills to communicate complex ideas in a straightforward, logical story.
- (4) Connections goal: Students will make connections between the theory and research they learn in class and everyday human behavior. Through a class project, students will also learn how to translation a theoretical question into an empirical hypothesis that can be tested scientifically.

Course Format:

Class meetings will be a mix of lecture, discussion, debate, and student presentations. Students are also expected to be prepared for each class through various reading and writing activities.

Course Materials:

There is no textbook for this course. Most of the materials will be primary source scientific articles, book chapters, and media articles to be distributed via Moodle.

Course Requirements and Evaluation:

1. Attendance
 - a. Students are expected to attend every class on time.
2. Quizzes (30%)
 - a. A short quiz will be given at the beginning of class when there is assigned reading.
 - b. Each quiz will consist of 5 questions (multiple-choice or short answer) and is worth 100 points. If you get all 5 correct, then you will get 100. 4/5 earns 90, 3/5 earns 80, 2/5 earns 70, and 1/5 earns 60. Even if you miss all 5 questions, you will earn 50 points just for taking it, so you should come to class on time and take the quiz even if you haven't done the reading.
 - c. The lowest grade in this category will be dropped from the final grade calculation. This includes quizzes that are missed because of tardiness or absence.
3. Individual presentation: *"Reading the news like a scientist"* (5%)
 - a. Individual students will choose a recent news article and share a critical view on it in forms of presentation and discussion leading.
 - b. Choose an article and acquire the instructor's approval at least 3 days before the scheduled presentation date.
4. Mini exams (15%)
 - a. Two short closed-book in-class exams will be administered.
 - b. More on this will be delivered in class.
5. Summary statements (20%)
 - a. After each time we complete a topic, students will be randomly formed into a group and write a summary statement about whether and why they think the discussed myth is true or false, or to what extent it is true or false.
 - b. Specific rubric will be discussed in class.
 - c. The lowest grade in this category will be dropped from the final grade calculation. This includes statements that are missed because of tardiness or absence.
6. Research Project (30%)
 - a. Students will work in groups to conduct empirical *experimental* research to validate a myth. It can be a known myth that was not covered in class or a plausible myth that you can come up with. You may also study a variant of an existing myth, testing specific conditions under which the myth may be true or false.

- b. Students will work on a written report throughout the semester. A draft of the Introduction in the form of a literature review (4%) and the Methods (4%) will be submitted as the project progresses.
 - c. A rough draft of the full paper will be submitted for peer review. 2% of the grade will be granted for completing the peer review activity.
 - d. The final paper will be 25 pages or more (double-spaced, 12-point font size, 1 inch margins) following the APA guideline, submitted at the end of the semester (10%).
 - e. Each group will make a video presentation of their work (6%), which will be presented at the end of the semester. Each presentation is expected to be around 10 minutes long.
 - f. As the project progresses, students will have opportunities to evaluate peers on their contributions to teamwork. Summarized scores based on peer evaluation will make up 4% of the grade.
 - g. For each assignment, 10 points (on a 100-point scale) will be deducted on submissions past deadline and additional 10 points every 24 hours thereon. This rule will be strictly imposed. Be sure to confirm the submission on Moodle.
 - h. Small workshops throughout the semester will guide students into the basics of research methods and writing a research report.
7. Excused absences
- a. Missed quizzes and summary statements due to extenuating circumstances including jury duty, military obligations, religious observance, scheduled activities for other classes, the death of a family member, or verifiable health-related incapacity may be made up in alternative forms only with formal, written documentation. Details will be discussed on a case by case.
8. Grading scale
- a. A: 93–100%; A-: 90–92%; B+: 87–89%; B: 83–86%; B-: 80–82%; C+: 77–79%; C: 73–76%; C-: 70–72%; D+: 67–69%; D: 63–66%; D-: 60–62%; F: 59% or below; INC: Incomplete.

Academic Honesty:

Since the integrity of the academic enterprise of any institution of higher education requires honesty in scholarship and research, academic honesty is required of all students at the University of Massachusetts Amherst. Academic dishonesty is prohibited in all programs of the University. Academic dishonesty includes but is not limited to: cheating, fabrication, plagiarism, and facilitating dishonesty. Appropriate sanctions may be imposed on any student who has committed an act of academic dishonesty. Instructors should take reasonable steps to address academic misconduct. Any person who has reason to believe that a student has committed academic dishonesty should bring such information to the attention of the appropriate course instructor as soon as possible. Instances of academic dishonesty not related to a specific course should be brought to the attention of the appropriate department Head or Chair. Since students are expected to be familiar with this policy and the commonly accepted standards of academic integrity, ignorance of such standards is not normally sufficient evidence of lack of intent (http://www.umass.edu/dean_students/codeofconduct/acadhonesty/).

Accommodation Statement

The University of Massachusetts Amherst is committed to providing an equal educational opportunity for all students. If you have a documented physical, psychological, or learning disability on file with Disability Services (DS), you may be eligible for reasonable academic accommodations to help you succeed in this course. If you have a documented disability that requires an accommodation, please notify me within the first two weeks of the semester so that we may make appropriate arrangements.

Diversity Statement

In recognition and affirmation of the worth and dignity of all persons, the instructor of this class is dedicated to upholding the values of diversity and inclusion and to minimizing disparities in access to learning. All students who are willing to learn are equally welcome without regard to age, race, ethnicity, birthplace, sex, gender identity, disability, sexual orientation or identity, socioeconomic status, political party or beliefs, or other group affiliation or personal characteristics. All students are likewise expected to accord each other the same level of respect, bearing in mind that becoming more respectful and inclusive is a journey rather than a destination. We will all have stumbling points along the way, including the instructor, and these are often valuable learning opportunities. If I ever say or do anything insensitive in this class, I sincerely welcome students to call me out or communicate their discomfort to me in person after class, during office hours, by email, or anonymously.

Extra credit

There is an opportunity to earn bonus points for SONA credits in this course. SONA credits can be earned through participating in research studies or through an alternative assignment as described below. Each SONA credit will increase your course grade by 0.5 points on a 100 point scale. In this class, you can use a maximum of 6 SONA credits that will increase your course grade by a maximum of 3.0 points. In order to earn SONA credits and assign them to this course, you must register for a SONA account or login to your existing account. Instructions for accessing SONA are available here:

<https://www.pbs.umass.edu/undergraduate/sona-and-research-participation/sona-instructions>

Experiment participation: You are encouraged to earn SONA credits by participating in research studies. The ability of scientists to conduct human subjects research depends on volunteers like you. Much of the science that we are able to teach in psychology courses is based on participation of undergraduate students in research studies. To earn SONA credits for research participation:

- 1) Complete the mandatory brief survey the first time you login to SONA.
- 2) You are encouraged to participate in the study titled “Long Prescreen Spring 2023”, which is only available until February 23rd at 2 pm. Participating in this online study may make you eligible for studies you would otherwise not know about.
- 3) Check for experiment availability frequently.
- 4) If you are interested in participating in a specific study, and you meet the eligibility requirements described in the study description, sign up.
- 5) Make a note of the time and specific location of the study. There will be reminders, but it is your responsibility to attend an experimental session that you signed up for.
- 6) After your participation, confirm that the researcher has assigned the correct number of SONA credits (1 credit for every 30 minutes of participation).
- 7) Assign your SONA credits to this class with this instructor. There may be other classes with the same name but a different instructor, so be careful about selecting the correct one.
- 8) Experiments must be completed by May 17th at 11:59 pm, and must be assigned to this course by May 22nd at 4:00 pm in order to receive the bonus points.

Other ways to earn SONA credits: Some students are ineligible to participate in research (e.g., not yet 18-years old) or choose not to participate in the research studies that are available. To earn SONA credits through an alternative activity:

- 1) Complete the mandatory brief survey the first time you login to SONA. Include the fact that you are unable or unwilling to participate in research studies when asked.
- 2) Check for the availability of ALTERNATIVE activities frequently. These will typically include attending an in-person research talk or participating in in-person research demonstrations similar to what you might do in a psychology class.

- 3) Make a note of the time and specific location of the alternative activity. There will be reminders, but it is your responsibility to attend the talk or session you signed up for.
- 4) After your participation, confirm that the correct number of SONA credits has been assigned (1 credit for every 30 minutes of participation).
- 5) Assign your SONA credits to this class with this instructor. There may be other classes with the same name but a different instructor, so be careful about selecting the correct one.
- 6) Alternative activities must be completed by May 17th at 11:59 pm, and must be assigned to this course by May 22nd at 4:00 pm in order to receive the bonus points.

Regardless of how you earn your SONA credits, please make note of the following:

SONA credits will not show up on Moodle. You can confirm that you have earned credits and assigned them to this course in SONA. The instructor will be sent the number of SONA credits that you earned at the end of the semester and before submitting your final grade for the course.

Attend the sessions you sign up for. Some research costs a great deal of time and money once a session is scheduled regardless of whether the participant shows up or not.

- 1) If you, an experimenter, or a session organizer needs to cancel a session with at least 24 hours notice for any reason, no SONA credit will be assigned and no penalty will be assigned.
- 2) For online studies that can be completed at any time, if you sign up but fail to participate by the deadline, no SONA credit will be assigned and no penalty will be assigned (marked as excused).
- 3) For in-person sessions and sessions that require you to be online at a specified time, you must either cancel more than 24 hours before the scheduled time or arrive at the designated place within 10 minutes of the scheduled time. Otherwise, the experimenter or session organizer will assign an unexcused “no-show” regardless of the reason.
- 4) If you are assigned three unexcused “no-shows” in a semester you will be unable to sign up for any more experiments or alternatives. Further, you will not earn any bonus points for the SONA credits that you have already earned.
- 5) If you have a valid reason for missing the session and failing to provide 24-hour notice, email <EMAIL> within 48 hours with the reason and any supporting evidence. Your reason and history of other no-shows will be reviewed. When there is a valid reason, unexcused “no-shows” will be changed to excused absences, which will also reinstate your access to SONA and your previously earned SONA credits.

What if a disability prevents me from participating in research or the alternative? Students with disabilities that are registered with Disability Services can request an accommodation from their instructor if neither experiment participation nor the alternative can work. The student with the instructor cc'd can email <EMAIL> for an alternative assignment (e.g., written summary of research articles) that does fully accommodate the needs of the student.

What if there are not a sufficient number of experiments or alternatives that I am eligible for? If you are having any problems accessing SONA or SONA credit opportunities, please contact <EMAIL>. Neither the instructors nor the teaching assistants for this class will be able to help. However, the department will provide sufficient opportunities for you to earn SONA credits if you want them and address the issues you are having within the first 8 weeks of the semester.

Course Schedule

Changes may be made throughout the semester.

	Agenda/Topic	Reading by this date	Other assignments due	Student presentation
2/7	Introduction			
2/9	<i>We only use 10% of the brain</i> Reading the news like a scientist	Higbee & Clay (1998)		
2/14	Summary statement exercise Basics of human subject research			
2/16	Strong inference Form project groups	Platt (1964)		
2/21	<i>Left-brained vs. right-brained</i>	Gazzaniga (1998)		
2/23	SNOW DAY			
2/28	Brainstorming project ideas		Submit five project ideas by 9PM on 2/22	
3/2	<i>Bigger brain is more intelligent</i>	Hines (2014)		<NAME>
3/7	Literature review		Bring a paper that relates to your project	<NAME>
3/9	<i>The Mozart effect</i>	Rauscher et al. (1993)		<NAME>
3/21	Proposal of research project		Proposal presentation	<NAME>
3/23	Proposal of research project		Proposal presentation	<NAME>
3/28	<i>Do video games make you smarter?</i>	Green & Bavelier (2003)	"Literature review" submitted to Moodle by 9PM	<NAME>
3/30	Mini-Exam #1 Methods Consultation			
4/4	Measurement & Statistics			<NAME>
4/6	Experiment day			<NAME>
4/11	Experiment day			<NAME>

4/13	<i>When in doubt, stick with your first hunch</i>	Tversky & Kahneman (1973)		<NAME>
4/20	Methods Consultation		"Methods" submitted to Moodle by 9PM	
4/25	<i>After three heads, the fourth throw must be tails</i>	Misirlisoy & Haggard (2014)		<NAME>
4/27	<i>Willpower is a limited resource</i>	Baumeister et al. (1998)		<NAME>
5/2	Analysis Consultation		"Full Draft" submitted to Moodle by 9PM	<NAME>
5/4	<i>Does power posing really work?</i>	Carney et al. (2010)		<NAME>
5/9	<i>Girls are better in language and boys are better in math</i>	Beilock et al. (2010)	"Peer Feedback" submitted to Moodle by 9PM	<NAME>
5/11	Mini-Exam #2 Paper and Presentation Consultation			
5/16	ONLINE: Video presentation			
5/23			"Final Paper" submitted to Moodle by 9PM	