

Experiment Analysis and Design in Affective Science (PSY CL) Fall 2022 Syllabus

Justin Dainer-Best

| Course Number | Time | Location | Office Hours |
|---------------|-----------------|-----------------------|--------------|
| PSY CL | Th, 13:30-15:30 | Affective Science Lab | Th, 12-13:30 |

[Make an appointment to come to my office hours.](#)

This course does not fulfill distributional requirements. It is worth 2 credit hours.

Wherever possible, I hope to work to make this course accessible and approachable for all students. For more information on accessibility for this course, please view [the section on that subject](#) below.

Overview

In this course, students will participate in laboratory research related to clinical psychology. The course is intended as part *one* of a two-part sequence. Over the two semesters of this course, we will expand on psychological theories, design behavioral tasks to test them, collect data from human participants using those tasks, and analyze the resulting data. Research foundations will connect to clinical psychology and the relationship between mood and cognition. Weekly meetings will involve discussion of empirical articles and practice/instruction in programming.

The first semester will focus on experiment design and data collection using online tools. The second semester will focus on data analysis using R. Class assignments will involve implementation of tasks, discussion and analysis of empirical articles, and presentation of proposals. Students interested in programming or data science are especially encouraged to apply. A final presentation will cap each semester.

Specifically, I encourage students in this class to work on projects relevant to understanding the relationship between mood and cognition. Students will take turns presenting relevant empirical articles.

The research discussed in this course may cover topics that are sensitive or personal for many students. If something discussed in class leaves you feeling upset, please speak to a trusted person about your experience. Further, if you find that you are struggling to cope with some of the topics discussed in class, you may contact [Bard Counseling Services](#), and [make an appointment](#); you may also email counselingservice@bard.edu or call 845-758-7433.

In the spirit of truth and equity, it is with gratitude and humility that we acknowledge that this class will take place on the sacred homelands of the Munsee and Muhheaconneok people, who are the original stewards of this land. Today, due to forced removal, the community resides in Northeast Wisconsin and is known as the [Stockbridge-Munsee Community](#). We honor and pay respect to their ancestors past and present, as well as to future generations and we recognize their continuing presence in their homelands. We understand that our acknowledgment requires those of us who are settlers to recognize our own place in and responsibilities towards addressing inequity, and that this ongoing and challenging work requires that we commit to real engagement with the Munsee and Mohican communities to build an inclusive and equitable space for all.

Objectives

By the end of the course you should. . .

- Become familiar with the terminology, methodology, and past research relating to mood and anxiety in clinical research
- Learn to create, run, and analyze experiments relating to mental health, including developing skills in several computerized systems
- Learn to use R, JavaScript, and other programming languages
- Use to collaborate using GitHub
- Learn to communicate the results of a research question
- Effectively participate in team-based psychological science

Instructor

The instructor for this course is Assistant Professor of Psychology Justin Dainer-Best (he/him).

Materials

There are no required materials for this course. There are few required *readings* for this course; you will choose empirical articles for most weeks.

Class Policies

Attendance

We will move at a rapid pace; material that is missed due to absence will not be repeated in class or office hours. Our classes are designed as interactive, and your absence will impact both your own understanding and the class or your group. Missing multiple days, especially in a once-weekly class, may impact your grade unless we have discussed this in advance.

However, this is a college class and you are an adult; your attendance is your decision. Late arrivals can be disruptive to the class. Consistent patterns of lateness are unfair to other students. Please be on time.

If you are not feeling well, please do not come to class.

Masks

For the first week of class, I ask that we all come to class masked and remain masked throughout the class. We will discuss masking as a class and come to an agreement on whether we will continue masked as a class throughout the semester, with the understanding that the safety of the community requires all of us to prioritize one another, and disabled individuals may need others to mask for their safety. Given the close quarters of the lab, we may choose to wear masks throughout the semester.

If you have recently been ill, please wear a mask when you attend; masks are effective at reducing spread of many respiratory illnesses. Each of us shares responsibility for the health and safety of all in the classroom.

Accommodations & Accessibility

Bard College is committed to providing equal access to all students. If you anticipate issues related to the format or requirements of this course, please contact me so that we can arrange to discuss. I would like us to discuss ways to ensure your full participation in the course. Together we can plan how best to support your learning and coordinate your accommodations. Students who have already been approved to receive academic accommodations through disability services

should share their accommodation letter with me and make arrangements to meet as soon as possible.

If you have a learning difference or disability that may relate to your ability to fully participate in this class, but have not yet met with the Disability Support Coordinator at Bard, you can contact their office through <https://www.bard.edu/accessibility/students/>; the Coordinator will confidentially discuss the process to establish reasonable accommodations.

I am available for meetings online as well as those in person.

Diversity, Equity, & Inclusion

It is important to me that this course provides an open and supportive learning environment for all students. I invite you to speak with me if you have concerns or questions regarding issues of belonging, safety, or equity in the classroom. I want our discussions to be respectful of all students. If I am not helping the classroom to feel like an inclusive environment, I invite you to provide me with [anonymous] feedback. Trauma and clinical experiences are topics about which many people have ideas or beliefs—all forms of knowledge are valuable. While we will primarily engage with the topic of trauma from an observational perspective, respect for all viewpoints is extremely important.

Plagiarism and Academic Integrity

I expect you to be familiar with what plagiarism is and is not. You may not present someone else's work as your own without proper citation. You may not copy someone else's work. You may not simply reword text from another source without giving credit. Please cite others' work where relevant, and use your own writing. If you are not sure about the definition of plagiarism, or whether something constitutes plagiarism, please consult with me or with someone at Bard's [Learning Commons](#). Students caught plagiarizing will be reported to the Academic Judiciary Board, will get no credit for the assignment, and may fail the course.

I operate from the standpoint that you are interested in learning this material, and are doing your best to operate with integrity.

Late Assignments

There are no late assignments in this course—with the exception of your need to complete all assignments by the last day of the semester. On days when you are called upon to present, you should plan to be prepared.

Grades

| Assignment | Points |
|-------------------------|------------|
| Experiment outline | 30 |
| Final presentation | 30 |
| Leading discussion | 10 |
| Task design | 10 |
| IRB | 10 |
| Analysis interpretation | 10 |
| Total | 100 |

Many aspects of this class will be graded on a pass/fail basis. However, I recognize that you may not wish to take this class as a P/D/F class—and as such, there are some assignments that will be graded. The [experiment outline](#) and your [final presentation](#) will receive grades (out of 30). Other assignments will receive 10 points if completed adequately. All assignments are due by the end of the semester.

Assignments

Article Discussion

Once during the semester, you will choose an empirical article (published after 2012; no longer than 15 pages in article format) on a particular area relating to adult mood, depression, or anxiety. This article may be specific to the cognitive symptoms of depression and anxiety, including relating to rumination, worthlessness, or hopelessness; it may also related to self-schema or the cognitive biases of depression. The article should come from a peer-reviewed academic journal, and I would suggest one of the following: *Cognition and Emotion*; *Behaviour Research and Therapy*; *Psychological Science*; *Clinical Psychological Science*; *Biological Psychiatry*; *Journal of Consulting and Clinical Psychology*; *Perspectives on Psychological Science*; *Behavior Therapy*; and *Journal of Abnormal Psychology*. You may also find articles by searching through Pubmed or Google Scholar. Your goal is to find an article that interests you and is relevant to the topics we have been discussing.

Your goal is to lead a discussion for your classmates on the topic. We will all find articles in the first two weeks of the semester and [schedule](#) them throughout the remainder of the semester.

This assignment is P/F: if you complete it, you will receive full points.

Task

As the primary focus of this class, in teams, you will work within an assigned topic area to develop a research question, design a study, and complete a data collection plan including a pre-registration form. You will also fill out an IRB proposal for collecting data. The design of the experiment itself will be an ongoing process throughout the semester.

All aspects of the task will be P/F: completing them adequately, and making edits when requested by me, will receive full points.

Experiment outline

An outline of the full experiment your group proposes—including sources and justification—will be due early on, and is the primary individual-authored writing you will complete this semester. This will be [graded](#) unless you are completing this course P/D/F.

Final presentation

A final presentation will be made by each group, using slides, and demonstrating the experiment they have designed, what they hope to gain from it, and how they will analyze the results. Presentations will be graded on completeness, slide creation, and cohesion of the group presentation. We will discuss in more detail in the classes before the presentation itself.

Analysis interpretation

We will discuss data visualization after pilot testing midway through the semester. Following a discussion, students will be given a data analysis report and asked to write a brief summary of that analysis—i.e., interpreting it. This will be graded for completion, with incomplete responses being returned for editing.

Schedule

| Day | Date | Topic | Article | Due |
|---------|--------|---|-------------------------------|---|
| Thursda | Sep 1 | Experiment analysis and design in affective science | Syllabus | |
| Thursda | Sep 8 | Theory & research question development | Johnson et al. (2007) | JDB |
| Thursda | Sep 15 | Tutorial: jsPsych | Quist et al. (2022) | MD |
| Thursda | Sep 22 | Tutorial: Qualtrics | | Working task |
| Thursda | Sep 29 | Experiment design practice | Sokol and Serper (2017) | GT; Working questionnaire |
| Thursda | Oct 6 | Research questions & literature review | Troller-Renfree et al. (2015) | KK |
| Thursda | Oct 13 | Experiment design | Mizrahi Lakan et al. (2022) | DDM; Experiment outline |

| Day | Date | Topic | Article | Due |
|---------|-----------|------------------------------|-------------------------|-------------------------|
| Thursda | Oct 20 | Preregistration | | IRB |
| Thursda | Oct 27 | Finalizing experiments | Faoro and Hamdan (2021) | LM |
| Thursda | Nov 3 | Pilot testing | Hoyt et al. (2021) | NH; Task |
| Thursda | Nov 10 | Visualizing preliminary data | Connolly et al. (2015) | KZ; Pilot testing |
| Thursda | Nov 17 | Slide Presentations | | Analysis interpretation |
| Thursda | Nov 24 | <i>Thanksgiving</i> | <i>no class</i> | |
| Thursda | Dec 1 | <i>Psychology Board days</i> | <i>no class</i> | |
| Thursda | Dec 8 | Give presentations | | Final presentation |
| Thursda | Dec 15 | Completion week | | |

References

- Connolly, S. L., Abramson, L. Y., & Alloy, L. B. (2015). Information processing biases concurrently and prospectively predict depressive symptoms in adolescents: Evidence from a self-referent encoding task. *Cognition and Emotion*, *30*(3), 550–560. <https://doi.org/10.1080/02699931.2015.1010488> (cit. on p. 7)
- Faoro, M., & Hamdan, A. C. (2021). Depressive symptoms may be associated with semantic memory decline in elderly adults. *Dementia & Neuropsychologia*, *15*(3), 350–356. <https://doi.org/10.1590/1980-57642021dn15-030006> (cit. on p. 7)
- Hoyt, L. T., Cohen, A. K., Dull, B., Castro, E. M., & Yazdani, N. (2021). “constant stress has become the new normal”: Stress and anxiety inequalities among U.S. college students in the time of COVID-19. *Journal of Adolescent Health*, *68*(2), 270–276. <https://doi.org/10.1016/j.jadohealth.2020.10.030> (cit. on p. 7)
- Johnson, S. L., Joormann, J., & Gotlib, I. H. (2007). Does processing of emotional stimuli predict symptomatic improvement and diagnostic recovery from major depression? *Emotion*, *7*(1), 201–6. <https://doi.org/10.1037/1528-3542.7.1.201> (cit. on p. 6)
- Mizrahi Lakan, S., Millgram, Y., & Tamir, M. (2022). Desired sadness, happiness, fear and calmness in depression: The potential roles of valence and arousal. *Emotion*. <https://doi.org/10.1037/emo0001120> (cit. on p. 6)

- Quist, A. J. L., Han, X., Baird, D. D., Wise, L. A., Wegienka, G., Woods-Giscombe, C. L., & Vines, A. I. (2022). Life course racism and depressive symptoms among young black women. *Journal of Urban Health*, *99*(1), 55–66. <https://doi.org/10.1007/s11524-021-00574-7> (cit. on p. 6)
- Sokol, Y., & Serper, M. (2017). Temporal self appraisal and continuous identity: Associations with depression and hopelessness. *Journal of Affective Disorders*, *208*, 503–511. <https://doi.org/10.1016/j.jad.2016.10.033> (cit. on p. 6)
- Troller-Renfree, S. V., Barker, T. V., Pine, D. S., & Fox, N. A. (2015). Cognitive functioning in socially anxious adults: Insights from the NIH toolbox cognition battery. *Frontiers in Psychology*, *6*. <https://doi.org/10.3389/fpsyg.2015.00764>