

# PSYC 421 Environmental Psychology (3 credits)

University of British Columbia, Vancouver  
Spring 2024, Tues/Thurs 3:30 – 5:00pm PT  
West Mall Swing Space (SWNG) - 122



**Instructor:** Dr. Jiaying Zhao  
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**Office Hours:** By Appointment

**TA:** Grayson Mullen  
**E-mail:** [gmullen@psych.ubc.ca](mailto:gmullen@psych.ubc.ca)  
**Office Hours:** By Appointment

## I. Introducing your Instructor and TA



**Instructor: Dr. Jiaying Zhao** (she/her/hers) is the Canada Research Chair in Behavioral Sustainability and an Associate Professor in the Department of Psychology and the Institute for Resources, Environment and Sustainability at UBC. She's also the director of the [Behavioral Sustainability Lab](#). Dr. Zhao received her Ph.D. in cognitive psychology from Princeton University. Her research uses psychological principles to design behavioral solutions to address sustainability challenges.



**TA: Grayson Mullen** is a PhD student in the Brain, Attention, and Reality Lab at the Department of Psychology at UBC. He works on research related to time perception, virtual reality, and vision.

## II. Course description and goals

This is a research project based course. This course focuses on designing and conducting research projects on environmental sustainability. This year, the first few weeks will be lectures where we explore the psychology of climate change, theories of behavior change, and how features of the natural and urban environments impact cognition and well-being. For the rest of the course, we will heavily focus on the research project where you will develop and conduct an experiment to promote environmental sustainability. Instead of lecturing, Dr. Zhao will take the role of a research mentor to help you conduct a high-quality research project and write up a research report which will be published on UBC SEEDS Library: <https://sustain.ubc.ca/teaching-applied-learning/seeds-sustainability-program>

**Important:** This course is NOT about memorization. This course teaches you **HOW to produce new knowledge to advance environmental sustainability**. By the end of this course, you will be able to:

1. Formulate a research proposal on sustainability with rigorous methods, similar to proposals you may write for future graduate school or fellowship applications
2. Evaluate the current literature in environmental psychology
3. Conduct a research project that advances environmental sustainability in some aspect, collect and analyze data, present findings in class, and write up a research report

## III. Required readings

There is no textbook. Instead, you will read peer-reviewed research articles. Although the required reading list is short, Dr. Zhao may send you additional articles relevant to your research project.

## IV. Course webpage

<http://canvas.ubc.ca> (location for announcements, lecture slides, recordings, and grades) Please check the class website weekly for updated information.

## V. Course requirements

### **In-class quizzes (10%)**

There will be a series of quizzes on Canvas throughout the course. The quizzes will be based on the assigned readings or videos. Please read the assigned papers or videos before class and come to class to complete the quizzes. The quizzes will be revealed in class. Dr. Zhao will discuss the answers after you have submitted your answers on Canvas in class.

### **Project discussion meeting with Dr. Zhao (5%)**

You will form into groups with each group consisting of 5 to 6 students. You are free to choose your group members. Your group will select one project from the UBC SEEDS (Social Ecological Economic Development Studies) Program. Your group will meet and collaborate with a UBC client on your project. Your group will need to meet with Dr. Zhao to present initial ideas and methodology for your group project. This is an opportunity to get feedback from Dr. Zhao on your project design and receive additional research articles to help you contextualize and formulate your research proposal. This meeting can occur during class or office hours. The grade will depend on how prepared and thoughtful your group are regarding project conceptualization and initial proposal development.

### **Research project proposal (25%)**

Before spring break, your group will write a one-page research proposal of the project. Each group only needs to submit one proposal. The proposal should be feasible, practical, and specific. It should outline what your research question is, what the hypothesis is, how you plan to collect and analyze the data, and what the implications of your project may be. You should also submit a draft of your survey on [UBC Qualtrics](#) as an appendix to the proposal.

### **Project approval meeting with Dr. Zhao (5%)**

Your group will need to meet with Dr. Zhao to seek final approval for your research project before starting data collection. During this meeting, you should present your survey on [UBC Qualtrics](#) to Dr. Zhao and receive any final feedback. By the end of the meeting, you should receive the final approval of the project, so that you can start data collection. This meeting can occur during class or office hours. The grade will depend on whether your survey is ready to launch, and whether you have integrated the feedback from the instructor, the client, and the TA into your survey.

### **Progress check-in + stats meeting with Dr. Zhao (5%)**

Your group will need to check in with Dr. Zhao to discuss data collection and statistical analyses. You can use [JASP](#), SPSS, or R to run your analyses. This meeting can occur during class or office hours. This is an opportunity to update Dr. Zhao on how your project is going, to solve any emerging problems, to make sure you will run the correct statistical analyses, and to get statistical help and feedback from Dr. Zhao. The grade will depend on the data collection progress of your project, how well your group have addressed any problems along the way, and whether you can run the correct statistical analyses.

### **Research project presentation (20%)**

In the last several classes of the term, your group will present your research project and preliminary findings to the class and your client. This is your chance to showcase your project and preliminary findings, and get feedback from Dr. Zhao, your client, other students, and the TA before your group submit the final report.

### **Research project final report (30%)**

By the last class in April, your group will submit a final report that includes an executive summary (a short abstract summarizing what you did) and a detailed report with appendices. Your detailed report should include a literature review that includes the papers and studies discussed in class, any research articles you read relevant to your project, research question, hypothesis, methods, results, discussions and recommendations for UBC based on your findings. You should also include appendices with the survey (not included in the page limit).

## Psychology 421: Course Schedule

<i>Class</i>	<i>Date</i>	<i>Day</i>	<i>Topic</i>	<i>Assignment</i>
1	Jan-9	Tu	Intros, Psychological benefits of nature	Read <a href="#">Berman et al. (2008)</a>
2	Jan-11	Th	Cognitive factors in environmental decisions	Read <a href="#">Tversky &amp; Kahneman (1981)</a>
3	Jan-16	Tu	Environmental cognition and cooperation	Read <a href="#">Schultz et al. (2007)</a>
4	Jan-18	Th	Psychology of climate change	Read <a href="#">Camilleri et al. (2019)</a>
5	Jan-23	Tu	SEEDS project selection	Form groups + choose a project
6	Jan-25	Th	Meet UBC clients	Discuss your project with your client
7	Jan-30	Tu	Nudge and choice architecture	Read <a href="#">Luo et al. (2023)</a>
8	Feb-1	Th	Behavioral interventions	Read <a href="#">Luo et al. (2022)</a>
9	Feb-6	Tu	Project discussion meeting	Meet with Dr. Zhao
10	Feb-8	Th	Project discussion meeting	Meet with Dr. Zhao
11	Feb-13	Tu	Project discussion meeting	Meet with Dr. Zhao
12	Feb-15	Th	Project discussion meeting	Meet with Dr. Zhao Submit research proposal by 5pm
-	Feb-20	Tu	NO CLASS – Spring break	
-	Feb-22	Th		
13	Feb-27	Tu	Project approval meeting	Meet with Dr. Zhao
14	Feb-29	Th	Project approval meeting	Meet with Dr. Zhao
15	Mar-5	Tu	Project approval meeting	Meet with Dr. Zhao
16	Mar-7	Th	Project approval meeting	Meet with Dr. Zhao
17	Mar-12	Tu	Progress check-in + stats meeting	Meet with Dr. Zhao
18	Mar-14	Th	Progress check-in + stats meeting	Meet with Dr. Zhao
19	Mar-19	Tu	Progress check-in + stats meeting	Meet with Dr. Zhao
20	Mar-21	Th	Progress check-in + stats meeting	Meet with Dr. Zhao
21	Mar-26	Tu	Progress check-in + stats meeting	Meet with Dr. Zhao
22	Mar-28	Th	Research presentation Day 1	Present your project in class
23	Apr-2	Tu	Research presentation Day 2	Present your project in class
24	Apr-4	Th	Research presentation Day 3	Present your project in class
25	Apr-9	Tu	Research presentation Day 4	Present your project in class
26	Apr-11	Th	Project final report Q&A	Submit project final report by 5pm

## ASSIGNED READINGS

The assigned videos will be sent on Canvas before class.

Berman, M. G., Jonides, J., & Kaplan, S. (2008) The cognitive benefits of interacting with nature. *Psychological Science*, 19, 1207-1212. <https://journals.sagepub.com/doi/full/10.1111/j.1467-9280.2008.02225.x>

Camilleri, A. R., Larrick, R. P., Hossain, S., & Patino-Echeverri, D. (2019). Consumers underestimate the emissions associated with food but are aided by labels. *Nature Climate Change*, 9, 53-58. <https://www.nature.com/articles/s41558-018-0354-z>

Schultz, P. W., Nolan, J. M., Cialdini, R. B., Goldstein, N. J., & Griskevicius, V. (2007). The constructive, destructive, and reconstructive power of social norms. *Psychological Science*, 18, 429-434. <https://journals.sagepub.com/doi/abs/10.1111/j.1467-9280.2007.01917.x>

Tversky, A., & Kahneman, D. (1981). The framing of decisions and the psychology of choice. *Science*, 211, 453-458. <https://science.sciencemag.org/content/211/4481/453>

Luo, Y., Douglas, J., Pahl, S., & Zhao, J. (2022). Reducing plastic waste by visualizing marine consequences. *Environment & Behavior*, 54, 809-832. <https://journals.sagepub.com/doi/pdf/10.1177/00139165221090154>

Luo, Y., Li, A., Soman, D., & Zhao, J. (2023). A meta-analytic cognitive framework of nudge and sludge. *Royal Society Open Science*. <https://royalsocietypublishing.org/doi/full/10.1098/rsos.230053>

### VI. Research participation (extra credit opportunity)

You have the opportunity to earn up to 3% on your overall final grade by participating in studies using the Human Subject Pool. This provides the valuable opportunity to observe the research process directly and to contribute to the ongoing research activities at UBC. For instructions on how to sign up, see <https://ubc-psych.sona-systems.com> **Please note that any inquiries about credits should be directed to HSP or the experimenters, NOT the instructor.** You will earn 1% for each hour of participation. These credits are added to your grade at the end of the course. Make sure that you retain your email confirmation of the experimental credit in the event that verification of participation is required when the final grades are compiled. If you do not correctly assign your credits to this course, you will NOT receive credit so please make sure you have done this correctly.

### VII. Course grading

In order to maintain equity across multiple course sections, all psychology courses are required to comply with departmental norms regarding grade distributions. According to departmental norms, **the mean grade in a 400-level class is 70 for a good class, 68 for an average class, and 66 for a weak class, with a standard deviation of 13.** Scaling may be used in order to comply with these norms; grades may be scaled up or down as necessary by the professor or department. Grades are not official until they appear on a student's academic record. You will receive both a percent and a letter grade for this course. At UBC, your course percentage is converted according to the key below:

A+	90-100%	B+	76-79%	C+	64-67%	D	50-54%
A	85-89%	B	72-75%	C	60-63%	F	0-49%
A-	80-84%	B-	68-71%	C-	55-59%		

Remember, you are earning a degree at a highly reputable post-secondary institution. Therefore, criteria for success are high. The Faculty of Arts offers the following guidelines that broadly characterize the kind of work that is generally associated with the main grade ranges. These characteristics help to put the Psychology Department Grading Policies into context. Please note that adequate performance is in the C range, which is the typical class average.

**A RANGE: *Exceptional Performance.*** Strong evidence of original thinking; good organization in written work; capacity to analyze (i.e., break ideas down) and to synthesize (i.e., bring different ideas together in a coherent way); superior grasp of subject matter with sound critical evaluations; evidence of extensive knowledge base.

**B RANGE: *Competent Performance.*** Evidence of grasp of subject matter; some evidence of critical capacity and analytic ability; reasonable understanding of relevant issues; evidence of familiarity with the literature.

**D-C RANGE: *Adequate Performance.*** Understanding of the subject matter; ability to develop solutions to simple problems in the material; acceptable but uninspired work; not seriously faulty but lacking style and vigor.

**F RANGE: *Inadequate Performance.*** Little or no evidence of understanding of the subject matter; weakness in critical and analytical skills; limited or irrelevant use of the literature.

## VIII. Course policies

### **Class participation**

Active learning is a critical component of a proper education and for that reason it will be frequently promoted during the term. You will be asked to answer questions at any point in class, and engage in group discussions. You are strongly encouraged to speak up in class.

### **Attendance and lecture slides**

Punctuality to class is a sign of respect to your instructor, TAs, and fellow students. In the event you miss a class, you should inform the course instructor. The primary reason for this is that lecture slides are designed to give you a framework, as opposed to every piece of information discussed in class. Lecture slides will be posted online. **Please note: the slides are only for the purpose of learning in this course and must not be distributed outside the course for any other reason.**

### **Reading the assigned articles**

Before class, you should **read the assigned article**. Dr. Zhao will also send you additional research articles relevant to your research project. There are three primary goals for reading research articles. The first goal is to expose you to primary literature in the field of environmental psychology. The second goal is to give you an opportunity to improve your ability to evaluate research, which is a fundamental skill any student should acquire. The third goal is to provide a template, a structure, and a writing style for your proposal and final report for the group project.

### **Syllabus or course schedule changes**

There may be changes to the syllabus and the course schedule during the term. You will be notified of these changes ASAP and no changes will be instituted that dramatically affect your ability to properly prepare for an assignment.

### **Assignment policy**

For assignments, you should submit your assignment by the specified deadline. If you are late in handing in your assignment, your grade will be deducted. For every hour after the deadline, 5% will be deducted until all percentages are gone. No exception will be made, unless you have a medical emergency. In this case, you must provide Dr. Zhao with a valid doctor's note (which will be verified with your medical doctor) within 24 hours after the deadline.

### **Academic misconduct**

Cheating, plagiarism, and other forms of academic misconduct are very serious concerns of the University, and the Department of Psychology has taken steps to alleviate them. Relevant to this course, the Department has implemented software that can reliably detect cheating by analyzing the patterns of students' responses. This will be used for every assessment in this course.

**In all cases of suspected academic misconduct, the parties involved will be pursued to the fullest extent dictated by the guidelines of the University.** Strong evidence of cheating may result in a zero credit for the work in question. According to the University Act (section 61), the President of UBC has the right to impose harsher penalties including (but not limited to) a failing grade for the course, suspension from the University, cancellation of scholarships, or a notation added to a student's transcript.

**Covid Safety:** It is important that all of us feel as comfortable as possible engaging in class activities while sharing an indoor space. Non-medical masks that cover our noses and mouths are a primary tool to make it harder for Covid-19 to find a new host. You can wear a non-medical mask during our class meetings, for your own protection, and the safety and comfort of everyone else in the class. If you have not yet had a chance to get vaccinated against Covid-19, vaccines are available to you for free. The higher the rate of vaccination in our community overall, the lower the chance of spreading this virus. You are an important part of the UBC community. Please arrange to get vaccinated if you have not already done so.

**If you're sick, it's important that you stay home – no matter what you think you may be sick with (e.g., cold, flu, other). If you think you might have Covid symptoms and/or have tested positive for Covid and/or are required to quarantine:** You can do a self-assessment for Covid symptoms here: <https://bc.thrive.health/covid19/en>

Do not come to class in-person if you are sick, have Covid symptoms, have recently tested positive for Covid, or are required to quarantine. This precaution will help reduce risk and keep everyone safer. In this class, the grading scheme is intended to provide flexibility so that you can prioritize your health and still be able to succeed. Please let the instructor know if you are sick.

**If you do miss class because of illness:**

- Make a connection early in the term to another student or a group of students in the class. You can help each other by sharing notes. If you don't yet know anyone in the class, post on the discussion forum to connect with other students.
- Come to online office hours.

**If I (the instructor) am sick:** I will do my best to stay well, but if I am ill, develop Covid symptoms, or test positive for Covid, then I will not come to class. If that happens, here's what you can expect:

- My TA or colleagues will substitute.
- If I am well enough to teach, but am taking precautions to avoid infecting others, we may have online class sessions. If this happens, you will receive an announcement on Canvas. You can anticipate that this would very likely be a last-minute announcement. Our classroom will still be available for you to sit and attend an online session, in this (hopefully rare) instance.