

## SCIENTIFIC THINKING

Course Syllabus (CRN: 14680)



**MW 2:00 - 3:20 PM**  
McKenzie Hall 129,  
University of Oregon

### COURSE DESCRIPTION

Psychology is the scientific study of the mind and behavior, but what does it mean to study something **scientifically**? In this course, you will learn how psychologists measure constructs, validate their measures, design studies, select representative samples, follow ethical principles, collect data, make inferences about people from that data, and critically evaluate those inferences. You will learn to “follow the data” when people make claims about the human mind and behavior and gain a set of skills to do that more wisely and rigorously – whether you are reading media accounts of research, reading peer-reviewed journal articles, or conducting scientific research yourself.

### OFFICE HOURS

|  |   |  |   |
|--|---|--|---|
| <b>Instructor</b><br>Sarah Dimakis, Ph.D.<br><a href="mailto:sdimakis@uoregon.edu">sdimakis@uoregon.edu</a><br>MT 10:00 – 11:00 AM<br>Straub 464 | <b>TA</b><br>Neha Nagarkar<br><a href="mailto:nagarkar@uoregon.edu">nagarkar@uoregon.edu</a><br>TBA | <b>TA</b><br>Tess Sameshima<br><a href="mailto:tesufuai@uoregon.edu">tesufuai@uoregon.edu</a><br>TBA | <b>TA</b><br>Arwa Adib<br><a href="mailto:aladi@uoregon.edu">aladi@uoregon.edu</a><br>TBA |
| <b>TA</b><br>Allyson Kuznia<br><a href="mailto:akuznia@uoregon.edu">akuznia@uoregon.edu</a><br>TBA   | <b>TA</b><br>Kayla McComb<br><a href="mailto:kmccomb@uoregon.edu">kmccomb@uoregon.edu</a><br>TBA    | <b>TA</b><br>Taren Rohovit<br><a href="mailto:trohovit@uoregon.edu">trohovit@uoregon.edu</a><br>TBA  |   |

### CONTACTING US

Please don't hesitate to contact us if you have any questions or concerns! We are always happy to help. Each student has been assigned a TA for this course, so you know exactly who to contact when you need assistance. You can find your assigned TA by checking the “office hours” page on Canvas. If you have any questions or concerns, including grade disputes, you should first reach out to your TA via e-mail or office hours. However, if your TA's office hours don't fit in your schedule, you're welcome to drop by on any office hours that do! When you e-mail us, please add PSY301 in the subject line (e.g., “PSY301 exam question”). You will receive a response within 2 business days. If we do not respond to your email within 2 business days, please resend it (making sure PSY301 is in the title) because we may have not received it.

### COURSE MATERIALS



The course textbook is Beth Morling's (2021) *Research Methods in Psychology*, 4<sup>th</sup> edition. You can refer to this list of [changes from the 3<sup>rd</sup> to 4<sup>th</sup> edition](#) if you are considering an earlier edition of the text. All other readings or supplementary videos have been uploaded to Canvas. Some class activities may require the use of a laptop, tablet, or smart device. **This course uses iClicker for attendance and in-class polling.** You can use either an iClicker remote or download the [iClicker app](#) on your mobile device or computer to participate. You may need to purchase an iClicker subscription. Accessibility is extremely important to me. If financial concerns are prohibiting you from accessing course materials, I urge you to meet with me and/or apply for a [textbook subsidy](#) through UO's Basic Needs Program.

## COURSE OBJECTIVES

In this course, you will be developing skills to be a *consumer* and *producer* of psychology research. Mainly, you will learn how to (1) think like a scientist who follows data and evidence, reducing your need to rely on the claims that others make about psychology research, (2) seek out psychology research that interests you and be able to identify the scientist's research questions, hypotheses, research design, evidence, and conclusions (3) critically evaluate the inferences that researchers (and the media or artificial intelligence) draw from scientific studies, and finally (4) communicate about psychological research, including the methodological and ethical issues currently plaguing the field.

## ESTIMATED STUDENT WORKLOAD

Upon completion of this course, you will earn 4 credits toward your degree. A four-credit course from the University of Oregon is equivalent to 120 hours of work across the term, or 12 hours per week for 10 weeks. You will spend about 30 hours in class (3 hours a week), about 40 hours reading or watching supplemental material (4 hours a week), and the remaining 50 hours (about 5 hours per week) working on weekly assignments (i.e., homework, research critiques, and studying for exams).

## COURSE MODALITY

This is an in-person course. Unlike asynchronous online/ASYNCR WEB courses, we will meet during scheduled class meeting times in *McKenzie Hall 129*. I will accommodate absences as described in the Participation section below. If you need additional flexibility, UO encourages you to consider ASYNCR WEB courses. If you need accommodation related to a medical or other disability, you can request those by working with the Accessible Education Center.

## TECHNICAL REQUIREMENTS

Information and communication outside of class time will occur on our Canvas page. To access our course Canvas site, log into [Canvas](#) using your DuckID. If you have questions about using Canvas, visit the [Canvas support page](#). Canvas and Technology Support also is available by phone (541-346-4357) or by [live chat on the Live Help webpage](#).

## ASSIGNMENTS & GRADING

Your course grade will be determined by the following assessments:

| <u>Assignment</u>       | <u>Grade Weight</u> |
|-------------------------|---------------------|
| Homework (x3)           | 30%                 |
| Research Critiques (x2) | 30%                 |
| Midterm Exams (x2)      | 20%                 |
| Final Exam              | 15%                 |
| iClicker Participation  | 5%                  |

The following grid provides the letter grade associated with each percent. If you are within .5% of a grade category, your grade will be rounded up if you have 100% in the Participation grade category. A student may be assigned an "A+" for a final grade if they demonstrate exemplary understanding of the course material across all assessments (> 98% on every assessment).

|              |              |              |                   |
|--------------|--------------|--------------|-------------------|
| A 93-100%    | B 83-86.99%  | C 73-76.99%  | D 63-66.99%       |
| A- 90-92.99% | B- 80-82.99% | C- 70-72.99% | D- 60-62.99%      |
| B+ 87-89.99% | C+ 77-79.99% | D+ 67-69.99% | F 59.99% or below |

## HOMEWORK ASSIGNMENTS

You will complete three homework assignments on Canvas, designed to help you apply the concepts you are learning in class to real psychology journal articles. These guided exercises will, for instance, show you how to locate key information in an empirical journal article and ask you to critique different decisions that the researcher has made (e.g., measurement, sample composition). All homework assignments are due on Canvas by 11:59pm on the Sunday the week they are assigned.

## RESEARCH CRITIQUES

You will write two brief research critiques (approximately two pages double-spaced each). For each critique, you will choose a psychology empirical journal article from a list of articles and then evaluate a media report (Critique #1) or an AI-generated summary (Critique #2) of the scientist(s)'s research. The two critiques are due on Canvas by 11:59pm on the Sunday the week they are assigned.

## MIDTERM AND FINAL EXAMS

There will be two in-class midterm exams and a final exam. Each exam includes 30 questions in multiple choice, fill-in-the-blank, and matching formats, as well as five short answer questions. The first exam covers material (lectures and readings) from weeks 1-3 and the second exam covers material from weeks 4-6. The final exam is cumulative but focuses on material from weeks 8-10. You may bring a 3" by 5" notecard with handwritten or typed notes to use during the exam. Notecards will be provided in class the week before each exam. A study guide will be posted one week before each exam. To review a graded exam, please notify the instructor or TA at least two days prior to the office hours when you plan to review it.

## PARTICIPATION & ABSENCES

By week 2, you are required to [create a student iClicker account](#) and [join our course](#), "Scientific Thinking (MW)". Your participation will be recorded starting in week 2. You can use either an iClicker remote or download the [iClicker app](#) on your mobile device or computer to participate. Your participation grade will be based on how many classes you participate in, not on the accuracy of your responses. **You may miss 2 classes without penalty.** Missing classes due to a religious observance, specific AEC accommodation, military deployment, or a University-sponsored event with signed documentation, do not count toward your two free absences. Difficult or complex situations that may impact attendance occur for many of us during a term. This reason-neutral policy means that absences are available both for students who do want to reach out about their experiences and students who do not. If you are feeling ill, please stay home and use one of your two absences. I made the participation policy with this in mind, so please use your absences with care so they're there for you if you need them.

## LATE WORK & MAKE-UP EXAMS

Assignments in this course are always due on Canvas Sundays at 11:59pm. In the case that you fall ill or otherwise cannot complete your work on time, I have built flexibility into the course in the following ways:

- All students have one free, no-questions-asked extension to turn in an assignment up to one week late **for any reason**, no questions asked. If you wish to use your extension, *please comment on the assignment "I am using my one free extension"* when you submit it to Canvas.
- Assignments will be marked 5% off for every day they are late (e.g., the raw score of assignment that is two days late will be multiplied by .9). Once an assignment is **one week late**, Canvas will lock the assignment, and it will receive a permanent "0" in the grade book.
- If you need to miss an exam for a university sanctioned reason (i.e., religious observance, specific AEC accommodation, military deployment, or a University-sponsored event), contact the instructor ASAP to arrange a make-up exam.

## ACCESS AND ACCOMMODATIONS

The University of Oregon and I are dedicated to fostering inclusive, equitable, and accessible learning environments for all students. The Accessible Education Center (AEC) assists students with disabilities in reducing barriers in the educational experience. You may be eligible for accommodations for a variety of disabilities – apparent disabilities, such as a mobility or physical disability, or non apparent disabilities, such as chronic illnesses or psychological disabilities. If you have or think you have a disability and experience academic barriers, please contact the Accessible Education Center (Location: 360 Oregon Hall; 541-346-1155; [uoaec@uoregon.edu](mailto:uoaec@uoregon.edu)) to discuss appropriate accommodations or support. The details of your disability will be kept confidential with the AEC and you are not expected to share this information with others. However, I invite you to discuss any approved accommodations or access needs at any time with me.

## ACCOMMODATIONS FOR RELIGIOUS OBSERVANCES

The University of Oregon respects the right of all students to observe their religious holidays, and will make reasonable accommodations, upon request, for these observances. If you need to be absent from a class period this term because of a religious obligation or observance, please fill out the [Student Religious Accommodation Request fillable PDF form](#) and send it to me within the first weeks of the course so we can make arrangements in advance.

## CLASSROOM COMMUNITY EXPECTATIONS

It's imperative to a healthy learning environment that we treat each other with *respect* and commit to learning from each other. This requires us to (1) refrain from passing judgment on others (and ourselves) for making mistakes or not yet knowing something, (2) be cognizant of how much we are speaking and adjust accordingly to allow the class to hear from different perspectives, and (3) when applicable, disagree with others by providing empirical evidence rather than attacking their character. Continued enrollment in the course indicates agreement that you will enthusiastically abide by these guidelines.

## ARTIFICIAL INTELLIGENCE USE

You are permitted to use AI tools (e.g., ChatGPT, Grammarly) to assist with studying for an exam, idea generation, or refining your writing. However, keep in mind that AI can provide inaccurate or overly simplistic responses, and you are responsible for the accuracy and quality of the work that you submit. If you choose to use these tools, then **they must not prevent you from achieving the learning goals of the course**. Relying on AI to think for you – such as copying an answer directly from ChatGPT and submitting it as your own -- will hinder your learning and therefore is considered a violation of the academic integrity policy for this course.

## ACADEMIC INTEGRITY

Any form of academic dishonesty, including getting outside help on assignments, plagiarizing of any kind, improper use of AI (as outlined in the policy above), or lying to the instructor or a TA will not be tolerated in this class. You are permitted to work with other students on outside of class assignments, but the work you submit *must be your own* and therefore should not be a direct copy of another student's work. If you have questions about what is considered academic dishonesty for this course, or if you are struggling with your coursework to the point that you feel you have no choice but to violate our academic integrity policy, please reach out to the instructor. There are other paths forward, and we will find them together. If I detect any academic dishonesty, I will follow the procedure to handle misconduct as outlined by the University. Instances of suspected cheating or plagiarizing will lead to a discussion between the instructor and student, and then reported to the University if applicable.

## YOUR WELLBEING

During your college experience, you may feel overwhelmed or stressed, experience anxiety or depression, struggle with relationships, or just need help navigating challenges in your life. If you're facing such challenges, you don't need to handle them on your own--there's help and support on campus. Getting help is a courageous thing to do—for yourself and those you care about. [University Health Services](#) helps students cope with difficult emotions and life stressors. If you need general resources on coping with stress or want to talk with another student who has been in the same place as you, visit the Duck Nest (located in the EMU on the ground floor) and get help from one of the specially trained Peer Wellness Advocates. University Counseling Services (UCS) has a team of dedicated staff members to support you with your concerns, many of whom can provide identity-based support. All clinical services are free and confidential. Find out more at [counseling.uoregon.edu](https://counseling.uoregon.edu) or by calling 541-346-3227 (anytime UCS is closed, the After-Hours Support and Crisis Line is available by calling this same number).

## BASIC NEEDS

Being able to meet your basic needs is foundational to your success as a student. If you are having difficulty affording food, don't have a stable, safe place to live, or are struggling to meet another need, visit the [UO Basic Needs Resource page](#) for information on how to get support. They have information food, housing, healthcare, childcare, transportation, technology, finances (including emergency funds), and legal support. If your need is urgent, please contact the Care and Advocacy Program by calling 541-346-3216, filling out the [Community Care and Support form](#), or by [scheduling an appointment](#) with an advocate.

## ACADEMIC DISRUPTION DUE TO CAMPUS EMERGENCY

In the event of a campus emergency that disrupts academic activities, course requirements, deadlines, and grading percentages are subject to change. Information about changes in this course will be communicated as soon as possible by email, and on Canvas. If we are not able to meet face-to-face, students should immediately log onto Canvas and read any announcements and/or access alternative assignments. Students are also expected to continue coursework as outlined in this syllabus or other instructions on Canvas.

## INCLEMENT WEATHER

It is generally expected that class will meet unless the University is officially closed for inclement weather. If it becomes necessary to cancel class while the University remains open, this will be announced on Canvas and by email. Updates on inclement weather and closure are also communicated as described on the [Inclement Weather webpage](#).

## REPORTING OBLIGATIONS

I am a designated reporter. For information about my reporting obligations as an employee, please see [Employee Reporting Obligations](#) on the Office of Investigations and Civil Rights Compliance (OICRC) website. Students experiencing sex- or gender-based discrimination, harassment or violence should call the 24-7 hotline 541-346-SAFE [7244] or visit [safe.uoregon.edu](https://safe.uoregon.edu) for help. Students experiencing all forms of prohibited discrimination or harassment may contact the Dean of Students Office at 541-346-3216 or the non-confidential Title IX Coordinator/OICRC at 541-346-3123 to request information and resources. Students are not required to participate in an investigation to receive support, including requesting academic supportive measures. Additional resources are available at [investigations.uoregon.edu/how-get-support](https://investigations.uoregon.edu/how-get-support). I am also a mandatory reporter of child abuse. Please find more information at [Mandatory Reporting of Child Abuse and Neglect](#).