

Western University
Psychology Department
PSYCHOL 9702 001
Research Methods in Social, Personality, & Social Developmental Psychology
Winter 2024

Time: See Student Centre
Location: See Student Centre

Enrollment Restrictions

Enrollment in this course is restricted to graduate students in Psychology, as well as any student that has obtained special permission to enroll in this course from the course instructor as well as the Graduate Chair (or equivalent) from the student's home program.

Instructor Information

Instructor: Erin Heerey
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Office Hours: By Appointment
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Course Description

In recent years, Psychology as a discipline has faced many challenges related to its research methods and practices. Some of these have generated significant changes in accepted best practice (e.g., pre-registration). Others have been largely ignored. This class will explore a number of methods for making scientific discoveries, the weaknesses either in those methods or the ways in which they are routinely applied, and finally what to do about these problems, including both existing and new solutions. We will take a broad-based philosophical approach to research design, its implementation, and the evaluation of the results we obtain, with the goal of improving scientific methods in our own specific domains.

Course Format

This course is an in person, seminar-style course, based on reading and active discussion of the weekly topics/readings.

Course Learning Outcomes/Objectives

Upon completion of this course, students should be able to:

1. Explain threats to the scientific endeavour in their field
2. Evaluate scientific claims/theories based on the methods used to test them
3. Generate critiques of current methods/research practices and identify possible solutions
4. Implement knowledge of research design, analysis, and interpretation in their own work

Course Materials

There is no textbook for this class. Instead, a set of readings (including both published articles and more informal works), videos, and other materials is curated for each week's discussion. These will be available either in PDF format on the OWL site or online via links to external resources.

Methods of Evaluation

Assignment	Date of Evaluation (if known)	Weighting
Participation	Weekly	15%
Thought Papers	Most Weeks (starting in Week 2)	20%
In-class Presentation	Assigned in first week of class	20%
Final Paper (draft)	March 21 (13:00)	5%
Peer Review	March 28 (13:00)	10%
Final Paper (revised)	April 8 (23:55)	30%
Total		100%

Participation (15%)

Attendance at all class meetings is required. Students should plan to attend class each week and actively participate in the discussion. Regular and significant contributions are expected, and these should generally be based on the course readings, as well as on students' discussion papers.

Thought Papers (20%)

Each week (almost) you will submit a 1-2 page (single spaced) paper in which you summarize and react to each of the readings/other materials for that week. For each reading/other resource, you should include a short summary of what you read (~ a paragraph; may be in bullet point format), along with your thoughts about it both positive and critical (~ a paragraph; may be in bullet point format). You should end your paper with 2 discussion questions that you will raise at appropriate time points in class that would facilitate discussion on an aspect of the week's topic that you found important.

Papers are due BEFORE the start of class each week (13:00 on Thursdays). Papers are marked on a pass/fail basis. If you submit a paper that provides evidence that you did the readings and thought about what you read, you will receive a pass. If your paper fails to show such evidence, shows evidence of having been written or contributed to by generative AI, has a Turn-It-In score > 25%, or is submitted after the deadline, you will receive a 'fail' grade for the work. Your lowest mark will be dropped so you may fail to submit one paper without penalty.

Note: The goal of this assignment is to get you to read actively and engage with the materials as you read. If you take good notes and ask yourself questions as you read (e.g., bullet pointed comments on a draft reaction paper) I do not anticipate that these thought papers will take all that much additional time over and above the time you spend reading. Because these are weekly assignments and you are all busy people, as long as I can understand your points, they do not need to be written in lengthy prose.

Presentation (20%)

A good way to advance work in your own field is to learn about work in other fields and then think about creative ways to apply that in your own research. However, this is easier said than done because the

volume of research in our own fields is so large that it is often difficult to consider research in others. Presentations by other researchers can help with this issue. The goal of the presentation is for other students in the class to learn about methodological practices and/or issues with these practices in your specific research field, as well as how your field has and/or should address these issues. To that end, you should produce a presentation for the class that tells the story of an important research technique or practice in your field, including its strengths and weaknesses, how it is innovative, the research questions it can address, and challenges or issues with its application. You should conclude with note for the future use of this technique either in your field or in others. You may choose to present on something related to your final paper or on something novel. Your presentation should seek to link the work in your field to at least 2 of the ideas we have discussed in class.

Presentations should be approximately 20 minutes long with 10 additional minutes allowed for questions from the audience. Your presentation should include a power-point (or other visual) element that assists in allowing you to make your point(s) clearly. You will present in one of the last two weeks of term (28 March or 4 April).

Paper Draft (5%)

A first draft of your final paper is due at the start of class on 21 March. The purpose of this draft is for you to get peer feedback on your paper. This draft will be assigned to a randomly selected peer for review. This is a pass/fail element of the course. If you submit a reasonably complete draft of your final paper to the OWL portal on time, you will receive credit for your work. Please ensure that your paper is anonymized before submission (i.e., identify it only by your Student Number).

Peer Review (10%)

Receiving a critical review from a peer is often helpful for both enhancing the work we have done and for shaping the way we approach future work. Providing a critical review can be likewise beneficial because it allows us the chance to find and improve mistakes in our own work. Beginning the day after paper drafts are due, you may download a copy of the paper draft that has been assigned to you to critique. This will be available in your OWL Dropbox. You should also download a copy of the Peer Review Template from the OWL assignments portal. This should be completed and uploaded to the Peer Review Assignment portal on OWL. A copy of this feedback will be provided to the person whose paper you reviewed so please keep it free from identifying information.

Final Paper (30%)

What's matter with your field and what should be done about it? In this paper, you will write a *Current Directions in Psychological Science* style paper (5000 words and 40 references max) in which you identify two important areas of methodological weakness in your field and propose/explain a solution to each of them. These can be related to topics we have discussed in class or may be novel issues that we have not discussed. Regardless of what you choose, your paper should describe the issues, explain their importance/prevalence, and propose solution(s) in clear coherent prose. As above, if your paper shows evidence of having been created by or contributed to by any generative AI, or is too similar to previous literature, you will receive a reduced grade. The final paper is due at 23:55 on the last day of term.

Course Timeline

Week	Date	Topic & Readings	Assessments Due
1	11 January	<p><u>Course introduction & opening discussion</u></p> <p>- Spellman, B.A. (2015). A short (personal) future history of revolution 2.0. <i>Perspectives on Psychological Science</i>, 10, 886-899.</p>	--
2	18 January	<p><u>Theory building in psychology</u></p> <p>- Platt, J. R. (1964). Strong inference. <i>Science</i>, 146, 347-353.</p> <p>- Fried, E.I. (2021). “On Theory”</p> <p>- Meehl, P. E. (1990). Why Summaries of Research on Psychological Theories are Often Uninterpretable. <i>Psychological Reports</i>, 66(1), 195-244.</p>	- Thought paper 1 due
3	25 January	<p><u>Creativity and rigour in research</u></p> <p>- McGuire, W. J. (1997). Creative hypothesis generating in psychology: Some useful heuristics. <i>Annual Review of Psychology</i>, 48, 1-30.</p> <p>- Gray, K., & Wegner, D. M. (2013). Six guidelines for interesting research. <i>Perspectives on Psychological Science</i>, 8, 549-553.</p> <p>- Crew, B. (2020) “Women and minority researchers have more original ideas but white men are rewarded faster.” <i>Nature Index</i>.</p>	- Thought paper 2 due
4	1 February	<p><u>Researcher degrees of freedom</u></p> <p>- Gelman, A., & Loken, E. (2014). The statistical crisis in science — a “garden of forking paths” — explains why many statistically significant comparisons don’t hold up. <i>American Scientist</i>, 102, 460-465.</p> <p>- Wicherts, J. M., Veldkamp, C. L., Augusteijn, H. E., Bakker, M., Van Aert, R., & Van Assen, M. A. (2016). Degrees of freedom in planning, running, analyzing, and reporting psychological studies: A</p>	- Thought paper 3 due

Week	Date	Topic & Readings	Assessments Due
		<p>checklist to avoid p-hacking. <i>Frontiers in psychology</i>, 1832.</p> <p>- Curran, P. & Hancock, G. (2021). "S3E07: In Defense of Researcher Degrees of Freedom." (Note: This is a podcast)</p>	
5	8 February	<p><u>Replicability</u></p> <p>- Pashler, H., & Harris, C. R. (2012). Is the replicability crisis overblown? Three arguments examined. <i>Perspectives on Psychological Science</i>, 7, 531-536.</p> <p>- Open Science Collaboration. (2015). Estimating the reproducibility of psychological science. <i>Science</i>, 349(6251), aac4716.</p> <p>de Menard, A. (2020). "What's wrong with Social Science and how to fix it: Reflections after reading 2578 papers."</p>	- Thought paper 4 due
6	15 February	<p><u>Validity or What are we really studying?</u></p> <p>- Schwarz, N. (1999). Self-reports: How the questions shape the answers. <i>American Psychologist</i>, 54, 93-105.</p> <p>- Dolinski, D. (2018). Is psychology still a science of behaviour? <i>Social Psychological Bulletin</i>, 13(2), Article e25025.</p> <p>- Wojciszke, B., & Bocian, K. (2018). Bad methods drive out good: The curse of imagination in social psychology research. <i>Social Psychological Bulletin</i>, 13(2), Article e26062.</p>	- Thought paper 5 due
7	22 February	<u>Reading week: No class!</u>	--
8	29 February	<p><u>Issues in scientific publishing & review</u></p> <p>- Fanelli, D. (2011). Negative results are disappearing from most disciplines and countries. <i>Scientometrics</i>, 90, 891-904.</p>	- Thought paper 6 due

Week	Date	Topic & Readings	Assessments Due
		<p>- Aly, M., Colunga, E., Crockett, M. J., Goldrick, M., Gomez, P., Kung, F. Y., ... & Diekman, A. B. (2023). Changing the culture of peer review for a more inclusive and equitable psychological science. <i>Journal of Experimental Psychology: General</i>.</p> <p>- Read about eLife's description of their new publishing model here and their assessment model here.</p>	
9	7 March	<p><u>Null-hypothesis significance testing</u></p> <p>- Stunt J, van Grootel L, Bouter L, Trafimow D, Hoekstra T, de Boer M (2021) Why we habitually engage in null-hypothesis significance testing: A qualitative study. <i>PLoS ONE</i> 16(10): e0258330.</p> <p>- Yarkoni, T. (2022). The generalizability crisis. <i>Behavioral and Brain Sciences</i>, 45, e1.</p>	- Thought paper 7 due
10	14 March	<p><u>Causal inference and research design</u></p> <p>- Gwern (2019). "Why correlation usually ≠ causation."</p> <p>- Bullock, J. G., Green, D. P., & Ha, S. E. (2010). Yes, but what's the mechanism? (don't expect an easy answer). <i>Journal of Personality and Social Psychology</i>, 98, 550-558.</p> <p>- Scheel, A. M., Tiokhin, L., Isager, P. M., & Lakens, D. (2021). Why Hypothesis Testers Should Spend Less Time Testing Hypotheses. <i>Perspectives on Psychological Science</i>, 16(4), 744-755.</p>	- Thought paper 8 due
11	21 March	<p><u>Improving the information value of research</u></p> <p>- Lakens, D., & Evers, E. R. K. (2014). Sailing From the Seas of Chaos Into the Corridor of Stability: Practical Recommendations to Increase the Informational Value of Studies. <i>Perspectives on Psychological Science</i>, 9(3), 278-292.</p>	<p>- Thought paper 9 due</p> <p>- Paper Draft Due</p>

Week	Date	Topic & Readings	Assessments Due
		- Ledgerwood, A., Soderberg, C. K., & Sparks, J. (2017). Designing a study to maximize informational value. In J. Plucker & M. Makel (Eds.), <i>Toward a more perfect psychology: Improving trust, accuracy, and transparency in research</i> (pp. 33-58). Washington, DC: APA.	
12	28 March	<u>Presentations</u>	- In-class Presentations - Peer Review Due
13	4 April	<u>Presentations</u>	- In-class Presentations - Final Paper Due

Statement on Academic Offences

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site:

http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_grad.pdf

All required papers may be subject to submission for textual similarity review to the commercial plagiarism-detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (<http://www.turnitin.com>).

Any computer-marked multiple-choice tests and/or exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating.

Health/Wellness Services

Students who are in emotional/mental distress should refer to Mental Health@Western

<http://www.uwo.ca/uwocom/mentalhealth/> for a complete list of options about how to obtain help.

Accessible Education Western (AEW)

Western is committed to achieving barrier-free accessibility for all its members, including graduate students. As part of this commitment, Western provides a variety of services devoted to promoting, advocating, and accommodating persons with disabilities in their respective graduate program.

Graduate students with disabilities (for example, chronic illnesses, mental health conditions, mobility impairments) are strongly encouraged to register with Accessible Education Western (AEW), a confidential service designed to support graduate and undergraduate students through their academic program. With the appropriate documentation, the student will work with both AEW and their graduate

programs (normally their Graduate Chair and/or Course instructor) to ensure that appropriate academic accommodations to program requirements are arranged. These accommodations include individual counselling, alternative formatted literature, accessible campus transportation, learning strategy instruction, writing exams and assistive technology instruction.