PSY 409H1F – Research Specialization: Theoretical Foundations
Thursday 1pm-3pm SS 560

Contact Information

Instructor:
Felix Cheung
SS 4092/600J
Zoom office: https://utoronto.zoom.us/my/felixcheung
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Office Hours:
Wednesday 1-2pm
(or by appointment)

Course Description and Goals

The course will introduce various meta-scientific topics related to psychological research. The aim is that by the end of this course, you will have:

1. Developed an understanding of the assumptions made in research projects,
2. Gained an appreciation of best research practices,
3. Improved your ability to understand and critique articles on meta-science,
4. Complete a collaborative project that advances meta-science, and
5. Strengthened your communication skills in both oral and written forms.

Course Webpages

Quercus is the main course webpage with course announcements, readings, discussion boards, and other course materials.

Perusall is an online tool that facilitates collaborative reading. Please visit https://app.perusall.com/home to set up a free Perusall account using your name as it appears on Quercus. To access this course on Perusall, please enter the course code CHEUNG-7ND3Z.

Course Evaluation/Marking Scheme

Marking Scheme Overview:

Class participation: 10 points
Perusall Annotation: 10 points
Discussion Facilitation: 20 points
Collaborative Project: 20 points
Final paper: 40 points

100 points

Class Participation (10 points)

Participation is fundamental to a small seminar course. We learn from each other when we complete the weekly preparations, offer thoughtful comments and questions, and listen and respond to others’ comments respectfully. Contributing regularly will help you feel more comfortable as the semester goes on. I may ask you directly for your thoughts during class.

Class participation will be graded from Weeks 2 to 11 (1 point per week).

Annotations on Weekly Required Readings (10 points)

Perusall is a collaborative platform where you can annotate while reading. Your annotations can be (but not limited to) questions or comments that bridge across readings, connections to your research experiences, and thoughtful critiques of the strengths or weaknesses in the paper, etc. This exercise is meant to help you engage with the course materials and prepare for class participation. The top 2 annotations will be graded for each article longer than 5 pages, and for short articles, the top 1 annotation will be graded.

Your annotations will be visible to other students, and you are encouraged to respond and give up-votes to annotations made by other students. Please submit your annotations by the end of the Tuesdays before 1pm so that the discussion facilitators have time to prepare for the in-class discussion.

Annotations will be graded from Weeks 2 to 11 (1 point per week).

Discussion Facilitation (20 points)

You will select 2 readings from 2 different weeks to serve as discussion facilitators during the semester. Each week, the facilitators should work together to present the take home messages in the readings in less than 15 minutes. In the remaining class time, the facilitators will stimulate discussions, pose discussion questions that bridge across the readings, and highlight issues shared in the annotations made by fellow students on Perusall. The default is that the grade will be based on the group performance.

Although it is certainly possible to facilitate an engaging discussion based on the course materials alone, a more effective facilitation can be achieved (especially for shorter articles under 5 pages) by i) drawing from additional sources (other scholarly articles, blog posts) and/or ii) using in-class activities or multimedia (such as [respectful] memes and videos).

Collaborative Project (20 points)

The class will complete a collaborative project related to meta-science. The goal is that the project will provide tangible benefits to the Department or to the field. A 1-page proposal (2.5%) is due on Week 4 (Sep 28), a 1-2 page progress update (2.5%) is due on Week 8 (Oct 26), and a final product and a 1-2 page reflection is due on Week 12 (Nov 30; 15%).
Final Paper (40 points)
You will write a final paper with no more than 12 double-spaced pages of text that focuses on the metascience of psychology (35%). You will submit a final paper proposal (5%) on Week 9 (Nov 2). Possible topics include: 1) a deep dive into one of the topics in the course, 2) a position paper (e.g., arguing for or against one of the required readings), 3) a review of a body of research that includes realistic, practical, and actionable plans of action (e.g., how to ‘move up’ the evidence readiness level of a research area), 4) a paper on what psychological researchers can learn from other disciplines that are grappling with similar issues, etc.

The paper should be written in APA format. Title page, figures, tables, and references do not count towards the page count.

I recommend the website for the Society for Improving Psychological Science as a potential source of inspiration: https://improvingpsych.org/

Course Policies

Penalties for Lateness
For each 24-hour period after the deadline, you will lose 3 points on the assignment.

Any term work that will be handed in after the final exam period is subject to a petition for extension of term work. This petition should be filed with the student’s College Registrar’s Office.

Plagiarism Detection Software
Normally, students will be required to submit their course essays to the University’s plagiarism detection tool for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the tool’s reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University’s use of this tool are described on the Centre for Teaching Support & Innovation web site (https://uoft.me/pdt-faq).

Specific Medical Circumstances
If you become ill and it affects your ability to do your academic work, consult me right away. Normally, I will ask you for documentation in support of your specific medical circumstances. This documentation can be an Absence Declaration (via ACORN) or the University’s Verification of Student Illness or Injury (VOI) form. The VOI indicates the impact and severity of the illness, while protecting your privacy about the details of the nature of the illness. You can submit a different form (like a letter from a doctor), as long as it is an original document, and it contains the same information as the VOI. For more information on the VOI, please see http://www.illnessverification.utoronto.ca. For information on Absence Declaration Tool for A&S students, please see https://www.artsci.utoronto.ca/absence. If you get a concussion, break your hand, or suffer some other acute injury, you should register with Accessibility Services as soon as possible.

Religious Accommodation
As a student at the University of Toronto, you are part of a diverse community that welcomes and includes students and faculty from a wide range of backgrounds, cultural traditions, and spiritual beliefs. For my part, I will make every reasonable effort to avoid scheduling tests, examinations, or other compulsory activities on religious holy days not captured by statutory
holidays. Further to University Policy, if you anticipate being absent from class or missing a major course activity (like a test, or in-class assignment) due to a religious observance, please let me know as early in the course as possible, and with sufficient notice (at least two to three weeks), so that we can work together to make alternate arrangements.

**ChatGPT**
ChatGPT is a novel AI chat bot. You are allowed to use it in this course, and if you use it, you are required to highlight parts of your paper that are i) **directly copy-and-pasted from ChatGPT** (in yellow) and ii) **edited based on ChatGPT-generated texts** (in blue). Please note that this is only for this course, and other instructors may have different views on ChatGPT.

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**Academic Resources**

**Accessibility Needs:**
Students with diverse learning styles and needs are welcome in this course. If you have an acute or ongoing disability issue or accommodation need, you should register with Accessibility Services (AS) ([www.accessibility.utoronto.ca](http://www.accessibility.utoronto.ca)) at the beginning of the academic year. Without registration, you will not be able to verify your situation with your instructors, and instructors will not be advised about your accommodation needs. AS will assess your medical situation, develop an accommodation plan with you, and support you in requesting accommodation for your course work. Remember that the process of accommodation is private: AS will not share details of your condition with any instructor, and your instructors will not reveal that you are registered with AS.

**Writing:**
As a student here at the University of Toronto, you are expected to write well. The university provides its students with a number of resources to help them achieve this. For more information on campus writing centres and writing courses, please visit [http://www.writing.utoronto.ca/](http://www.writing.utoronto.ca/).

**Academic Integrity and Plagiarism:**
All students, faculty and staff are expected to follow the University's guidelines and policies on academic integrity. For students, this means following the standards of academic honesty when writing assignments, collaborating with fellow students, and writing tests and exams. Ensure that the work you submit for grading represents your own honest efforts. Plagiarism—representing someone else’s work as your own or submitting work that you have previously submitted for marks in another class or program—is a serious offence that can result in sanctions. Speak to me for advice on anything that you find unclear. To learn more about how to cite and use source material appropriately and for other writing support, see the U of T writing support website at [www.writing.utoronto.ca/](http://www.writing.utoronto.ca/). Consult the Code of Behaviour on Academic Matters for a complete outline of the University’s policy and expectations. For more information, please see [http://www.artsci.utoronto.ca/osai](http://www.artsci.utoronto.ca/osai) and [http://academicintegrity.utoronto.ca/](http://academicintegrity.utoronto.ca/)

**Other Resources**
Student Life Programs and Services ([http://www.studentlife.utoronto.ca/](http://www.studentlife.utoronto.ca/))
Academic Success Services ([http://www.studentlife.utoronto.ca/asc](http://www.studentlife.utoronto.ca/asc))
Counselling and Psychological Services ([http://www.studentlife.utoronto.ca/hwc](http://www.studentlife.utoronto.ca/hwc))
<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Assignments</th>
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<tbody>
<tr>
<td>1</td>
<td>Sep 7</td>
<td>Introduction</td>
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<td>2</td>
<td>Sep 14</td>
<td>Replication Crisis and Beyond</td>
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<td>3</td>
<td>Sep 21</td>
<td>Scientific Utopia</td>
<td>Collaborative Project: Proposal (2.5%)</td>
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<td>4</td>
<td>Sep 28</td>
<td>Preregistration Informative Null Results</td>
<td>Collaborative Project: Proposal (2.5%)</td>
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<td>5</td>
<td>Oct 5</td>
<td>Generalizability Crisis Idiosyncrasies in Research</td>
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<td>6</td>
<td>Oct 12</td>
<td>Measurement Crisis</td>
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<td>7</td>
<td>Oct 19</td>
<td>Causality</td>
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<td>8</td>
<td>Oct 26</td>
<td>Personalized vs. Population-wide approach</td>
<td>Collaborative Project: Progress Update (2.5%)</td>
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<td>9</td>
<td>Nov 2</td>
<td>WEIRD</td>
<td>Final paper proposal (5%)</td>
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<td>Nov 9</td>
<td>Reading Week (No class)</td>
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<td>10</td>
<td>Nov 16</td>
<td>Social Justice</td>
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<td>11</td>
<td>Nov 23</td>
<td>Students' Choice</td>
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<td>12</td>
<td>Nov 30</td>
<td>Wrap-up</td>
<td>Collaborative Project: Final Product + Reflection (15%)</td>
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<td>Dec 7</td>
<td>Wrap-up</td>
<td>Final Paper (35%)</td>
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**Week 1: Introduction**  
(Sep 8)

**Week 2: Replication Crisis and Beyond**  
(Sep 15)


**Week 3: Scientific Utopia + Frequentist vs. Bayesian**  
(Sep 22)


**Week 4: Preregistration + Informative Null Results**  
(Sep 29)


**Week 5: Generalizability Crisis + Idiosyncrasies in Research**  
(Oct 6)


**Week 6: Measurement Crisis**  
(Oct 13)


**Week 7: Causality**  
(Oct 20)


**Week 8: Personalized vs. Population-wide approach**  
(Oct 27)


Personalized Happiness working paper

**Week 9: WEIRD**  
(Nov 3)


Ukraine
**Week 10: Social Justice**  
(Nov 17)


Aggregation

**Week 11: Students’ Choice**  
(Nov 24)

**Week 12: Wrap-up**  
(Dec 1)

* Short articles for which your top 1 annotation will count towards your grade.