

**Faculty of Health Department
of Psychology PSYC 4180 6.0
Section F
CRITICAL THINKING IN
PSYCHOLOGY
Wednesdays/ 8:30 am – 11:30 am
ONLINE ONLY
Fall/Winter 2021-22**

Instructor and T.A. Information

Instructor: Michaela Hynie
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T.A.: Michael Ruderman
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Office hours: In class

Course Prerequisite(s): Course prerequisites are strictly enforced

- HH/PSYC 1010 6.00 (Introduction to Psychology), with a minimum grade of C.
- HH/PSYC 2020 6.00 (Statistical Methods I and II) or substitutes
- HH/PSYC 2030 3.00 (Introduction to Research Methods) or substitutes
- Students must be in an Honours program in Psychology and have completed at least 84 credits (excluding (EDUC) education courses)

Course Credit Exclusions

Please refer to [York Courses Website](#) for a listing of any course credit exclusions.

Required Texts:

- Weekly readings accessible from the course [eClass](#)

Course Website: [eClass](#)

Course Description

In this course, students will develop and practice critical thinking skills required to become responsible and analytical consumers of research in psychology. This course will include lectures, discussion, in-class workshops, peer review sessions, and student presentations. This course will be offered entirely on-line for the full academic year, using synchronous (live and simultaneous) lectures and discussions in combination with some asynchronous (recorded and/or accessed at different times) activities.

Program Learning Outcomes

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

1. Demonstrate ability to think critically about applications of psychological findings reported in the media.

2. Demonstrate knowledge of variety of ways to express psychological findings in everyday life.
3. Critically identify myths or stereotypes in common discourse.
4. Recognize limits of conclusions based on inferential statistics
5. Demonstrate an ability to determine which discourses, questions and voices are missing from research

Specific Learning Objectives

Demonstrate the ability to collect, describe, understand, and think critically about research questions, results and inference, and how they are communicated in both scientific journals and in the media.

Demonstrate ability to gather, interpret, evaluate and integrate research from distinct (and sometimes conflicting) sources to arrive at an informed opinion.

Effectively communicate scientific research and informed conclusions on research in a range of communication media for a general public audience understanding level.

Demonstrate understanding of the strengths and limitations of different communication media and use this understanding to communicate science within them.

Demonstrate the ability to evaluate credibility of evidence using reason and logic.

Course Requirements and Assessment:

Details of assignments are available on the class website

Assessment	Date of Evaluation	Weighting
Assignment 1: Myth presentation	September 29/October 6	15%
Group Assignment: Argument Map	November 10	10%
Assignment 2: Statistics gone wrong	December 1	15%
Assignment 3: Qualitative bias assignment	February 2	10%
Assignment 4: Explain the debate	March 16	30%
Group Discussion Facilitation	Throughout (2 x 5%)	10%
Group Discussion Participation	Throughout (2 x 5%)	10%
Total		100%

Attendance Policy

Attendance and participation are expected. This is a capstone seminar course. Participation is evaluated based on participation in group discussions.

Late Work

Late assignments will be accepted up to one week after the deadline including weekend days. If your assignment is late, you will be deducted a late penalty of 5% per day, including weekend days. Late assignments will not be accepted after one week of the missed deadline.

Missed in-class participation points and group discussion facilitations cannot be made up.

Students with a documented reason for missing a deadline, such as illness, compassionate grounds, etc., which is confirmed by supporting documentation ([Attending Physician Statement](#)), may request accommodation from the Course Instructor. Further extensions or accommodation will require students to submit a formal petition to the Faculty. You can participate in group discussions via forum post if you know in advance you cannot attend, or if you have technical difficulties, provided it is submitted within 24hours of the discussion date.

If you are missing a deadline due to illness, compassionate grounds, etc., you must contact me

(mhynie@yorku.ca) within 48 hours of missing the deadline.

Important New Information Regarding Missed Tests

For any missed tests or late assignments, students MUST complete the on-line form: <http://psychology.apps01.yorku.ca/machform/view.php?id=16179>, which will be received and reviewed in the Psychology undergraduate office.

Failure to complete the form within 48 hours of the original deadline will result in a grade of zero for the test/assignment.

Add/Drop Deadlines

For a list of all important dates please refer to: [Fall/Winter 2021-2022 - Important Dates](#)

	FALL (F)	YEAR (Y)	WINTER (W)
Last date to add a course without permission of instructor (also see Financial Deadlines)	Sept. 21	Sept. 21	Jan. 23
Last date to add a course with permission of instructor (also see Financial Deadlines)	Oct. 5	Oct. 26	Feb. 7
Drop deadline: Last date to drop a course without receiving a grade (also see Financial Deadlines)	Nov. 12	Feb. 11	Mar. 18
Course Withdrawal Period (withdraw from a course and receive a grade of “W” on transcript – see note below)	Nov. 13- Dec. 7	Feb. 12 - Apr. 10	Mar. 19- Apr. 10

***Note:** *You may withdraw from a course using the registration and enrolment system after the drop deadline until the last day of class for the term associated with the course. When you withdraw from a course, the course remains on your transcript without a grade and is notated as "W". The withdrawal will not affect your grade point average or count towards the credits required for your degree.*

Academic Integrity for Students

York University takes academic integrity very seriously; please familiarize yourself with [Information about the Senate Policy on Academic Honesty](#).

It is recommended that you review Academic Integrity using the [Academic Integrity toolkit at SPARK](#)

Test Banks

The offering for sale of, buying of, and attempting to sell or buy test banks (banks of test questions and/or answers), or any course specific test questions/answers is not permitted in the Faculty of Health. Any student found to be doing this may be considered to have breached the Senate Policy on Academic Honesty. In particular, buying and attempting to sell banks of test questions and/or answers may be considered as “Cheating in an attempt to gain an improper advantage in an academic evaluation” (article 2.1.1 from the Senate Policy) and/or “encouraging, enabling or causing others” (article 2.1.10 from the Senate Policy) to cheat.

Electronic Devices During a Test/Examination

Electronic mobile devices of any kind are not allowed during a test or examination. Students are required to turn off and secure any electronic mobile device in their bag which is to be placed under the chair while a test/exam is in progress. Any student observed with an electronic device during a test/exam may be reported to the Undergraduate Office for a potential breach of Academic Honesty.

Academic Accommodation for Students with Disabilities

While all individuals are expected to satisfy the requirements of their program of study and to aspire to do so at a level of excellence, the university recognizes that persons with disabilities may require reasonable accommodation to enable them to do so. The [York University Accessibility Hub](#) is your online stop for accessibility on campus. The Accessibility Hub provides tools, assistance and resources.

Policy: York University shall make reasonable and appropriate accommodations and adaptations in order to promote the ability of students with disabilities to fulfill the academic requirements of their programs.

The nature and extent of accommodations shall be consistent with and supportive of the integrity of the curriculum and of the academic standards of programs or courses. Provided that students have given sufficient notice about their accommodation needs, instructors shall take reasonable steps to accommodate these needs in a manner consistent with the guidelines established hereunder.

For Further Information please refer to: [York university academic accommodation for students with disabilities policy](#).

Course Materials Copyright Information

These course materials are designed for use as part of the PSYC 4180 course at York University and are the property of the instructor unless otherwise stated. Third party copyrighted materials (such as book chapters, journal articles, music, videos, etc.) have either been licensed for use in this course or fall under an exception or limitation in Canadian Copyright law.

Copying this material for distribution (e.g. uploading material to a commercial third-party website) may lead to a violation of Copyright law. [Intellectual Property Rights Statement](#).

Grading as per Senate Policy

The grading scheme for the course conforms to the 9-point grading system used in undergraduate programs at York (e.g., A+ = 9, A = 8, B+ = 7, C+ = 5, etc.). Assignments and tests* will bear either a letter grade designation or a corresponding number grade (e.g. A+ = 90 to 100, A = 80 to 90, B+ = 75 to 79, etc.)

(For a full description of York grading system see the York University Undergraduate Calendar - [Grading Scheme for 2021-22](#))

Weekly Class Readings

Weekly class readings can be found on the course [eClass](#) site. Class meetings will include recorded and live lectures and guest lectures, Group Discussion Facilitations, and assignment workshop time. Office hours will also be held during class time

Week & Date	Type	Reading	Due
Week 1: September 8	What do we mean by critical thinking?	Introduction to the syllabus and the technology Using technology and participating in class Levy, N. (2017). Nudges in a post-truth world. <i>The Journal of Medical Ethics</i> , 43, 495-500. Kuhn, D. (2001). How do people know? <i>Psychological Science</i> , 12(1), 1-8.	
Week 2: September 15	Confirmatory bias inside psychology and out	The 7 Deadly Sins of Psychology by Chris Chambers— Chapter 1: The sin of bias Hughes, S., Lyddy, F., & Lambe, S. (2013). Misconceptions about psychological science: A review. <i>Psychology Learning & Teaching</i> , 12(1), 20-31. Skitka, L. J. (2020). An optimistic take on avoiding liberal (and other sources of) bias. <i>Psychological Inquiry</i> , 31, 88-89.	Discussion 1:
Week 3: September 22	Whose psychology?	Henrich, J., Heine, S., J., & Norenzayan, A. (2010). The weirdest people in the world? <i>Behavioral and Brain Sciences</i> , 33(2/3), 1-75 Roberts, S. O., Bareket-Shavit, C., Dollins, F. A., Goldie, P. D., & Mortenson, E. (2020). Racial inequality in psychological research: Trends of the past and recommendations for the future. <i>Perspectives on Psychological Science</i> , 1-15. Neilson, M., Haun, D., Kartner, J., & Legare, C. H. (2017). The persistent sampling bias in developmental psychology. <i>Journal of Experimental Child Psychology</i> , 162, 31-38	Discussion 2:
Week 4: September 29	Why do we believe that?	5 minutes, 5 slides: Describe common myths in psychology Presentations, Groups A group E	Assignment 1: Myths and how they are supported
Week 5: October 6	Why do we believe that?	5 minutes, 5 slides: Describe common myths in psychology Presentations, Groups F through J	Assignment 1: Myths and how they are supported
October 13		READING WEEK – NO CLASS	

Week 6: October 20	Cultural bias and clinical psychology	<p>Guest Lecture, Dr. Darius Gishoma</p> <p>Mukamana, D., Lopez Levers, L., Johns, K., Gishoma, D. Kayiteshonga, Y., & Ait Mohand A. (2019). A community-based mental health intervention: Promoting mental health services in Rwanda. In: S. Okpaku (Ed.) <i>Innovations in Global Mental Health</i> (pp. 1-17). Springer, Cham. https://doi.org/10.1007/978-3-319-70134-9_36-1</p> <p>Bracken, P., Giller, J., & Summerfield, D. (2016). Primum non nocere. The case for a critical approach to global mental health. <i>Epidemiological and Psychiatric Sciences</i>, 25, 506-510.</p>	Discussion 3
Week 7: October 27	Bias in interpretation	<p>Kahne, J., & Bowyer, B. (2017). Educating for democracy in a partisan age: Confronting the challenges of motivated reasoning and misinformation. <i>American Educational Research Journal</i>, 54(1), 3-34.</p> <p>Teo, T. (2010). What is epistemological violence in the empirical social sciences? <i>Social and Personality Compass</i>, 4/5, 295-303</p>	Discussion 4:
Week 8: November 3		Group Argument Map Exercise	
Week 9: November 10	The Sin of Hidden Flexibility	<p>The 7 Deadly Sins of Psychology by Chris Chambers – Chapter 2</p> <p>Simmons, J. P., Nelson, L. D., & Simonsohn, U. (2011). False-positive psychology: Undisclosed flexibility in data collection and analysis allows presenting anything as significant. <i>Psychological science</i>, 22(11), 1359-1366.</p> <p>p-hacking....What it is and how to avoid it. StatQuest with Josh Starmer</p> <p>Veritasium: How to update your beliefs systematically—Bayes’ Theorem</p> <p>Veritasium: Is most published research wrong?</p>	Group Argument Map Due
Week 10: November 17	Statistics review	<p>Podcast: What is statistics: Crash Course Statistics #1</p> <p>Podcast: How p-values help us test hypotheses: Crash Course Statistics #21</p> <p>Podcast: ANOVA Part 2: Dealing with Intersectional Groups: Crash Course Statistics #34</p> <p>Podcast: Fitting Models is like Tetris: Crash Course Statistics #35</p>	

Week 11: November 24	Stats support	In class statistics support	
Week 12: December 1	The Sin of Unreliability	The 7 Deadly Sins of Psychology by Chris Chambers – Chapter 3 Podcast: Stereothreat by Dan Engber and Amanda Aronczyk https://www.wnycstudios.org/podcasts/radiolab/articles/stereothreat	Assignment 2 due

		WINTER BREAK	
Week 13: January 12	Bias in Neuroscience	Resnick, B. (September 9, 2016). There's a lot of junk fMRI research out there. Here's what top neuroscientists want you to know. <i>Vox</i> Racine, E., Waldman, S., Rosenberg, J., & Illes, J. (2010). Contemporary neuroscience in the media. <i>Social Science & Medicine</i> , 71, 725-733. Bennet, C. M., Baird, A., A., Miller, M. B., & Wolford, G., L. (2009). Neural Correlates of Interspecies Perspective Taking in the Post- Mortem Atlantic Salmon: An Argument For Proper Multiple Comparisons Correction	
Week 14: January 19	Introduction to Qualitative Research	Bahari, S. F. (2010). Qualitative versus quantitative research strategies: Contrasting epistemological and ontological assumptions. <i>Sains Humanika</i> , 52(1), Gergen, K. J., Josselson, R., & Freeman, M. (2015). The promises of qualitative inquiry. <i>American psychologist</i> , 70(1), 1.	Discussion 5
Week 15: January 26	Bias in Qualitative Research	Roulston, K. & Shelton, S. A. (2015). Reconceptualizing bias in teaching qualitative research methods. <i>Qualitative Inquiry</i> , 21(4), 332-342. Pratt, M. G., Kaplan, S., & Wittington, R. (2020). The tumult of transparency: Decoupling transparency from replication in establishing trustworthy qualitative research. <i>Administrative Science Quarterly</i> , 65(1), 1-19.	
Week 16: February 2	Visualize this...	Guest lecture: Mike Ruderman Logie, C.H., Dias L V., Jenkinson, J., Newman, P. A., MacKenzie, R., K., Mothopeng, T. Madau, V., Ranotsi A., Nhlengethwa, W., & Baral, S. D. (2019). <i>Health Education and Behaviour</i> , 46(1), 146-156. Barone T. (2012). Going public with arts-inspired social research: Issues of audience. In J. G., Knowles & A. L. Cole (Eds). <i>Handbook of the arts in qualitative research: Perspectives, methodologies, examples and issues</i> (pp. 485-492). Thousand Oaks: Sage Publications Inc.	Assignment 4: Qualitative bias
Week 17: February 9	Office hours and in-class meetings	Office hours and in-class meetings	

February 16	READING WEEK		
Week 18: February 23		<p>The 7 Deadly Sins of Psychology by Chris Chambers—Chapter 5</p> <p>Why do scientists commit misconduct? Interview with Cristy McGoff, Director of Research Integrity at UNC Greensboro</p> <p>Jacobsen, C., Fosgaard, T.R., & Pascual-Ezama, D. (2018). Why do we lie? A practical guide to the dishonesty literature. <i>Journal of Economic Surveys</i>, 32(2), 357-387.</p>	Discussion 6
Week 19 March 2	The Sins of Hoarding and Internment	<p>The 7 Deadly Sins of Psychology by Chris Chambers—Chapter 4</p> <p>The 7 Deadly Sins of Psychology by Chris Chambers – Chapter 6</p> <p>Fox, A. & Brainard, J. (2019). University of California boycotts publishing giant Elsevier over journal costs and open access. <i>Science</i>, February 28, 2019.</p>	
Week 20: March 9	“Giving science away”	<p>Somers, J. (2018). The scientific paper is obsolete. <i>The Atlantic</i>, April 5, 2018</p> <p>Grossman, R. (2014). Science communication: could you explain it to your granny? <i>The Guardian</i>, October 10, 2014</p>	
Week 21: March 16	The Sin of Bean Counting	<p>The 7 Deadly Sins of Psychology by Chris Chambers – Chapter 7</p> <p>Tafreshi, D., Slaney, K., L., & Neufeld, S. D. (2016). Quantification in psychology: Critical analysis of an unreflective practice. <i>Journal of Theoretical and Philosophical Psychology</i>, 36(4), 233-249</p>	Assignment 4: Explain the debate
Week 22: March 23	Working together	<p>Community Based Research, Guest Lecture; TBA</p> <p>Collins, S. E., Clifasefi, S. L., Stanton, J., The LEAP Advisory Board, Straits, K. J. E., Gil-Kashiwabara, E., Rodriguez Espinosa, P., Nicasio, A. V., Andrasik, M. P., Hawes, S. M., Miller, K. A., Nelson, L. A., Orfaly, V. E., Duran, B. M., & Wallerstein, N. (2018). Community-based participatory research (CBPR): Towards equitable involvement of community in psychology research. <i>American Psychologist</i>, 73(7), 884–898.</p>	Discussion 7
Week 23: March 30	Evaluating “Higher Ed”	<p>Page, D. (2020). The academic as consumed and consumer. <i>Journal of Education Policy</i>, 35(5), 585-601.</p> <p>Lian Niu, L., Behar-Horenstein, L.S., & Garvan, C. W. (2013). Do instructional interventions influence college students’ critical thinking skills? A meta-analysis. <i>Educational Research Review</i>, 9, 114-128.</p>	

<p>Week 24: April 6</p>	<p>Redemption</p>	<p>The 7 Deadly Sins of Psychology by Chris Chambers – Chapter 8</p> <p>Fine, M. (2006). Bearing witness: Methods for researching oppression and resistance---a textbook for critical research. <i>Social Justice Research</i>, 19(1), 84-108.</p> <p>Martin, D. H. (2012). Two-eyed seeing: A framework for understanding indigenous and non-indigenous approaches to indigenous health research. <i>CJNR</i>, 44(2), 20-42.</p>	<p>Discussion 8</p>
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