

**Faculty of Health**  
**Department of Psychology**  
**PSYC 4180 6.0 Section E: CRITICAL THINKING IN PSYCHOLOGY**  
**Online via Zoom**  
**Fall/Winter, 2022-2023**

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**Instructor and T.A. Information**

<b>Instructor</b>	Michaela Hynie
<b>Email</b>	<a href="mailto:mhynie@yorku.ca">mhynie@yorku.ca</a>
<b>Office Hours</b>	W 11:30 -12:30 or by appt
<b>T.A.</b>	Emma Ritchie
<b>Email</b>	<a href="mailto:evritchi@yorku.ca">evritchi@yorku.ca</a>
<b>Office Hours</b>	By appt

**Course Prerequisite(s): Course prerequisites are strictly enforced**

- HH/PSYC 1010 6.00 (Introduction to Psychology), with a minimum grade of 50%.
- HH/PSYC 2020 6.00 (Statistical Methods I and II) or substitute
- 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.

**Course website: [eClass](#)**

All course materials will be available on the course eClass site, unless otherwise indicated by the instructor. The site will be your central access point for course materials including academic papers, podcasts, on-line videos and other media sources.

**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, 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.

**Specific Learning Objectives**

Demonstrate the ability to 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 the ability to 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.

**Required Text**

Chambers, C. (2017). *The seven deadly sins of psychology: A manifesto for reforming the culture of scientific practice*. Princeton: Princeton University Press.

Additional required and optional readings and materials are posted in eClass each week

**Course Requirements and Assessment:**

Assessment	Date of Evaluation	Weighting
Assignment 1: Why do we believe this?	September 27	10%
Assignment 2: Who is left out? (group assignment)	October 25	10%
Assignment 3: Statistics gone wrong	December 1	15%
Assignment 4: Qualitative bias	January 25	10%
Assignment 5: Show me....	February 28	15%
Assignment 6: Where is the evidence?	March 27/April 3	15%
Group Discussion Facilitation	Date varies	5%
Group Participation	Throughout	10%
Class Participation	Throughout	10%
<b>Total</b>		<b>100%</b>

**Description of Assignments**

**Assignment 1: Why do we believe this? (10 marks, due September 27th)**

In this assignment you are reflecting on logical arguments and bias. Choose one of the myths provided in the readings. Explain why you think people believe this myth, using the heuristics

discussed in the readings. Finally, suggest two ways of testing this myth: One confirmatory test and one disconfirming test.

### **Assessment 2: Who is left out? (10 marks—group assignment, due November 2)**

In this assignment we tackle “WEIRD” science. There have been claims that psychology is now becoming more inclusive. Is that true? You will be divided into groups based on which area of psychology you want to focus. For this assignment, you will each find a recent paper published in one of the American Psychological Association’s (APA) journals and prepare a brief, informal, presentation to your group indicating what the study was focused on and its main findings and then detail who the sample was. What information is presented about the sample? What information is missing? As a group, discuss your papers and come up with a brief summary of what the “typical” sample is for research in your area, in the form of one or two powerpoint slides. How representative do samples seem to be in this area, given the studies your group members have reviewed?

### **Assessment 3: Statistics gone wrong (15 marks, due December 7)**

Psychology has a history of questionable practices, particularly with respect to how we use statistics. In this assignment, we will be bad scientists... what happens when you go fishing for a significant result? Is it possible to get a significant effect, even when the finding you seek is actually impossible? You will be given a data set and asked to try to make the impossible possible, by manipulating the data in search of a significant finding...(don’t ever do this in real life!!)

### **Assessment 4: Qualitative bias (10 marks, due February 8)**

The first term really focuses on questionable practices in quantitative research methods, but how do we assess the quality and rigour of qualitative data? In this assignment you will identify a qualitative study and describe how the authors ensure and report on the rigour of the research methods.

### **Assessment 5: Show me.... (15 marks, due March 8)**

One of the most popular ways of communicating research findings is through an infographic. An infographic uses images to convey the main findings of an area of research in a way that is clear, engaging and impactful. In this assignment you will summarize the main finding(s) from two recent articles presenting different perspectives on the same issue.

### **Assessment 6: Where is the evidence? (15 marks, due March 27/April 3)**

When a new study comes out, it is often picked up by the media and then reported on in ways to make it more exciting and relevant to the audience. But how often do they get these claims right? In this assignment, you are locating a bold new scientific finding from psychology, and then going to the original article and assessing whether the media is interpreting the findings

correctly. What does the evidence actually say? Have the media accurately reported the findings, and are their conclusions about the meaning of the study justified? Why or why not? You will present the claim, the study, and your analysis of the accuracy of reporting in a brief powerpoint presentation in small groups (3 to 4 people per group). In order to fit you all in (and ensure we can see all of them), the presentations are divided over 2 classes.

### **Group Discussions (10%) and Facilitation (5%):**

There will be 8 formal group discussions in class, where you will be asked to get together in your assigned groups to come up with a summary of an assigned reading for that week. As group members you will decide how you want to undertake the division of labour and agree on the main points of the assigned reading, and the most interesting, surprising, or relevant aspects of the reading. The facilitator will take notes and submit a structured report on the group discussion. The facilitator will also rate the participation of the group members in the discussion.

### **Class Format and Attendance Policy**

Attendance and participation are expected but you can request asynchronous participation if you need to miss a class. Please contact us about that. Participation is evaluated based on attendance and contribution to class; there may be structured in-class questions or activities that will be used to assess this component.

### **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 89, B+ = 75 to 79, etc.)

For a full description of York grading system see the York University Undergraduate Calendar – [Grading Scheme for 2023-24](#)

### **Late Assignments**

For any late assignment, students must contact the instructor in advance. **An extension is possible for assignments but must be negotiated with the instructor at least 24 hours in advance.** If an extension is not requested then a late penalty of 5% per 24 hours will apply

## Add/Drop Deadlines

For a list of all important dates please refer to [Undergraduate Fall/Winter 2023-2024 Important Dates](#)

	Fall (Term F)	Year (Term Y)	Winter (Term W)
Last date to add a course <b>without permission</b> of instructor (also see Financial Deadlines)	September 20	September 20	January 22
Last date to add a course <b>with permission</b> of instructor (also see Financial Deadlines)	September 28	September 28	January 31
Drop deadline: Last date to drop a course without receiving a grade (also see Financial Deadlines)	November 8	February 8	March 11
Course Withdrawal Period (withdraw from a course and receive a grade of "W" on transcript – see note below)	November 9 – December 5	February 9- April 8	March 12- April 8

## Add and Drop Deadline Information

There are deadlines for adding and dropping courses, both academic and financial. Since, for the most part, the dates are **different**, be sure to read the information carefully so that you understand the differences between the sessional dates below and the [Refund Tables](#).

You are strongly advised to pay close attention to the "Last date to enrol without permission of course instructor" deadlines. These deadlines represent the last date students have unrestricted access to the registration and enrolment system.

After that date, you must contact the professor/department offering the course to arrange permission.

You can drop courses using the registration and enrolment system up until the last date to drop a course without receiving a grade (drop deadline).

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.

## Electronic Device Policy

This course will be delivered in an online format and therefore electronic devices (e.g., tablets, laptops) are permitted during class time for course-related purposes.

## 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 by completing the [Academic Integrity Tutorial](#) and [Academic Honesty Quiz](#)

### **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 university encourages students with disabilities to register with Student Accessibility Services (SAS) to discuss their accommodation needs as early as possible in the term to establish the recommended academic accommodations that will be communicated to Course Directors as necessary. Please let me know as early as possible in the term if you anticipate requiring academic accommodation so that we can discuss how to consider your accommodation needs within the context of this course.

<https://accessibility.students.yorku.ca/>

### **Excerpt from Senate Policy on Academic Accommodation for Students with Disabilities**

1. Pursuant to its commitment to sustaining an inclusive, equitable community in which all members are treated with respect and dignity, and consistent with applicable accessibility legislation, York University shall make reasonable and appropriate accommodations in order to promote the ability of students with disabilities to fulfill the academic requirements of their programs. This policy aims to eliminate systemic barriers to participation in academic activities by students with disabilities.

All students are expected to satisfy the essential learning outcomes of courses. Accommodations shall be consistent with, support and preserve the academic integrity of the curriculum and the academic standards of courses and programs. 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 PSYC4180 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](#).

### **Course Schedule**

The course schedule is provided on eClass