

**SYLLABUS**  
**PSYCHOLOGY 3RM3: RESEARCH METHODS**  
Department of Psychology, Neuroscience, and Behaviour  
McMaster University  
FALL Term 2016

Course time and location: Lectures MW 11:30am & F1:30pm in KTH B135; Tutorials M10:30am or T5:30pm (various rooms).

**Professor:**

Dr. J. Ostovich

Email: [jmostovich@mcmaster.ca](mailto:jmostovich@mcmaster.ca)

Phone: *Do not phone me.*

Office: PC-415A

Office hours: Available by appointment; see *Avenue* for announcements about schedule office hours.

**Teaching Assistants:**

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**Please note:** This syllabus – including scheduling, topic order, topics themselves, assessments dates and times, and assessment strategy – is subject to change if circumstances warrant (e.g., TA loss, “snow days”, failure to secure testing rooms).

**Course Description.** This course is designed to introduce you to research methods in psychology. We will discuss basic foundations in empirical thinking, and major research designs used by psychologists, including both experimental and non-experimental designs. By the end of term, you will have the background necessary to assess, interpret, and do research.

**Readings** (required): Cozby & Rawn (2016). *Methods in Behavioural Research*, 2<sup>nd</sup> Canadian Edition.

**Evaluation.** Your final mark will be based on your performance on three tests (80%) and in tutorials (20%).

**Tests:** You will write two midterms (@20% for midterm 1 and 25% for midterm 2) and one final exam (@35%). These will cover lecture materials *and* assigned readings, *even* readings not discussed in class.

*What will the tests be like?* Tests will be *non-cumulative* and will consist of multiple choice (MC) questions, fill-in-the-blanks, and written answer questions. You will answer a mixture of fact-based questions (e.g., “what is the definition of X?” or “what is the key term used to describe Y?”), conceptual questions (e.g., “why is concept X important?” or “how do you know that a researcher can draw conclusion Y?”), and applied questions (e.g., “given what you know about topic A, how would you design a study to test behaviour B?” or “Researcher X failed to include Y in their design. Is this a problem? Explain.”). Readings will be tested primarily in the MC section, and lectures will be tested primarily in the written section.

The final exam *may* be cumulative, if circumstances (missed midterms) force me to hold a cumulative final. However, my preference is for this not to happen, and I will do everything in my power to prevent it from happening.

Tutorials: Performance in tutorials is worth 20% of your final mark in 3RM3.

Participation is worth 10% of your final mark. It will be marked out of 20 points, as follows:

(1) Tutorial leaders will randomly select and assess 1/3<sup>rd</sup> of their students each week, until every student's work has been assessed 3 times. Each of these assessments will be marked out of 5, for a total of 15 possible participation points. The participation marking rubric is available on *Avenue* under "course documents"; read this rubric so that you know what your tutorial leader will be looking for.

(2) Every day after tutorial, you must write notes on what you contributed to that day's tutorial – any question(s) you asked, any answer(s) you gave, any comment(s) you made, any input you had into group activities, etc. You can even write down how useful you thought your contribution was, and explain why. If you didn't contribute much, explain why (e.g., did you have a great idea that someone else mentioned? explain why you didn't join in once that other person spoke up). You must upload this record to your Dropbox on Avenue to Learn within 24 hours of the start of your tutorial. These reports will be worth a total of 5 possible participation points.

Bonus points may be available for students who note a confusing inconsistency between lecture and textbook, and bring in a cue card, with page numbers and specifics, outlining the perceived problem to their tutorial leader. These cue cards must be handed in during the week a topic has been discussed in class, so keep up with your readings, and read carefully, for the possibility of a participation bonus point.

The other 10% of your tutorial/lab mark will be based on your performance on two lab assignments. Assignment 1 (@5%) will involve running an observational study and handing in a written report of your methods and results; assignment 2 (@5%) will involve planning a field or lab experiment and giving an oral presentation of your proposed methods and results to your tutorial group.

For test dates, see below, under "schedule". Assignment dates will be set as we go.

NB: The instructor reserves the right to alter the evaluation scheme if circumstances warrant (e.g., TA loss).

**Test-Taking Policy**. Electronics must stay in your bag, turned off. If a phone rings or vibrates during a test, you will be penalized **5%** off your *final grade in the course*. The only things allowed on your desk and/or outside of your bag during testing sessions are pens, pencils, erasers, something to eat or drink if needed, tissues if needed, and your student ID.

### **Missed Tests/Absences:**

Tests: Report your absence to McMaster and to both Dr. Ostovich *and* your tutorial leader (CC'ed) **within 2 days of the missed test**. Failure to comply with the **two-days rule** could result in your earning a mark of zero on a missed test. Make-up tests are held one week after the original test, during class time; hence the need for speedy communication.

In order to receive any sort of accommodation (e.g., makeup test), I must receive an official university email indicating that you've complied with university regulations, as well as your personal email requesting accommodation.

Tutorials: If you know *ahead of time* that you must miss tutorial, contact your tutorial leader (not Dr. Ostovich) *before* tutorial. If you miss tutorial but didn't know that you would, the same rule applies: contact your tutorial leader (not Dr. O.) *immediately* (within **24 hours**, unless you're demonstrably unable to do so, because trapped under something heavy, or unconscious).

Missed tutorials will be judged on a case by case basis.

How to report an absence to McMaster: In the event of an absence for medical or other reasons, students should *carefully* review and follow the regulations outlined in the undergraduate calendar, "[Requests for Relief for Missed Academic Term Work](#)". Please note that these regulations have changed beginning Fall 2015. Any deviation from these regulations will result in a mark of "0" for the missed work.

Note that you may only use an MSAF for work valued at *less than 25%*. Therefore, you *cannot use the MSAF* for Midterm 2, and must follow the regulations described in part 2 of the *Requests for Relief* section should you miss Midterm 2.

How to report an absence to teaching staff: Send an email to both Dr. Ostovich and your tutorial leader (CC'ed) that does the following: (a) *briefly* explains why you've been forced to miss the test (less detail is best!); (b) requests relief for the missed work, and (c) indicates whether you have submitted documentation to the university, and if not, when that will be happening. The content of your email will be kept confidential.

What if you miss a make-up test? If you miss the make-up test due to a prolonged illness or prolonged family crisis (or similar), then you must report your absence for both the original test *and its make-up* to your Faculty or Program office **within 2 days of the makeup test**; otherwise, you will receive a mark of zero for the missed work. If you can provide an acceptable excuse for having missed the make-up, then we will figure something out for you. If you **miss both midterms and their makeups**, then **you will fail** this course (you cannot have an 80% final). You are advised to seek academic counseling if this happens to you.

**E-mail Policy.** E-mails must originate from a **valid McMaster account** (please use *MacMail* rather than the *Avenue* system for all e-mail communication). As per McMaster policy, e-mail sent from third-party providers (e.g., hotmail, cogeco, google) will be deleted. Please also keep in mind that e-mails to your professors and TAs are professional communications. They should (1) include correct spelling and punctuation, (2) have an *informative subject line*, and (3) be brief.

**Website Policy.** You are expected to check our *Avenue to Learn* website regularly for announcements, updates, discussion board postings, and other valuable information. It is *your responsibility* to keep up with the information provided on this site.

Use of the website's **discussion boards** is strongly encouraged, and, in the case of non-private inquiries, is *preferred to email communication*. By asking questions on the discussion boards (rather than over e-mail), you are (1) giving other students the chance to benefit from your question, and (2) provide an encoding (learning) experience for students who wish to answer your question (this is *strongly* encouraged!).

The discussion boards are meant to be a "safe place" for asking and answering questions. Students who are rude or inconsiderate (e.g., "trolls") may be banned from using them.

Finally, students should be aware that, when they access the electronic components of this course, private information such as first and last names, user names for McMaster e-mail accounts, and program affiliation may become apparent to all other students in the same course. The available information is dependent on the technology used. Continuation in this course will be deemed consent to this disclosure. If you have any questions or concerns about such disclosure please discuss this with the course instructor.

**Policy re. the Recording of Lectures.** If you feel that recording lectures will help you perform optimally in the course, then feel free to do so. You are especially encouraged to record lectures *if you find my pacing a bit fast*. HOWEVER: Consider the lectures **copyrighted material**: you **cannot post recordings anywhere online**, including on our *Avenue* website.

**Final Grade Calculations.** Your final grade will be converted to a letter grade, according to the following scheme:

<u>Percentage (Grade)</u>	<u>Percentage (Grade)</u>	<u>Percentage (Grade)</u>	<u>Percentage (Grade)</u>
90-100 (A+)	77-79 (B+)	67-69 (C+)	57-59 (D+)
85-89 (A)	73-76 (B)	63-66 (C)	53-56 (D)
80-84 (A-)	70-72 (B-)	60-62 (C-)	50-52 (D-)
			0-49 (F)

**Note:** The instructor reserves the right to adjust final marks up or down, depending on overall performance in the course. Students *who do not pass the final*, or whose final exam mark is their *lowest mark* in the course, will *not* have their mark adjusted up under any circumstances.

**Note as Well:** Your final mark is your final mark, unless a marking or mathematical error has been made. Special favours to one student are unfair to the majority of students who neither ask for nor get those same favours. Therefore, if you are concerned about your final mark, it is your responsibility to visit with me or with one of your TA's for studying help.

**Academic Integrity.** You are expected to exhibit honesty and use ethical behavior in all aspects of the learning process. Academic credentials you earn are rooted in principles of honesty and academic integrity. Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. This behavior can result in serious consequences, e.g., a grade of zero (0) on an assignment, loss of course credit with a notation on the transcript (“grade F assigned for academic dishonesty”), and/or suspension or expulsion from the university. It is *your* responsibility to understand what constitutes academic dishonesty. For information on academic dishonesty, please refer to McMaster’s Academic Integrity Policy [here](#).

## **DATES, TOPICS, AND READINGS**

**Basic structure of the course.** Below, you will find a list of topics (with associated readings listed in [blue](#)) that I expect to cover this term. This syllabus *does not contain exact dates* other than those associated with tests. I do this in order to allow us flexibility in timing of topics. I will keep you updated on where you should be in your readings on the news section of our website. I will also remind you of which topics will be covered on each test.

**A note on the readings.** Extra readings may be assigned as we go (these will be posted on *Avenue*; it is your responsibility to keep track of any added content by keeping up to date on the website). Plan carefully so that you do not find yourself “cramming” the readings at the last minute. Please note that I will not always explicitly discuss a given reading. *Read and learn all readings anyway.*

**A note on dates and deadlines.** The instructor and university reserve the right to modify elements of the course during the term. The university may change the dates and deadlines for any or all courses in extreme circumstances. If a modification becomes necessary, reasonable notice and communication with the students will be given with an explanation and the opportunity to comment on changes. It is the responsibility of the student to check their McMaster email and course websites weekly during the term and to note any changes.

### **Test dates.**

**Midterm 1:** Friday 7 October (during class time, in KTH B135 and BSB B136; room assignments TBA on *Avenue*)

**Midterm 2:** Friday 11 November (during class time, in KTH B135 and BSB B136; room assignments TBA on *Avenue*)

**Final Exam:** To be scheduled by the Registrar

### **LECTURES: Topics and Readings.**

Unit 1. Foundational Concepts in Research Methods.

- Module 1: What is Empirical Thinking? [Ch. 1](#)
- Module 2: Why is Empirical Thinking Better Than Other Forms of Thinking? [Ch. 1](#)
- Module 3: How Science Progresses: The Theory-Data Cycle. [Ch. 2](#)
- Module 4: Three Scientific Claims and How to Evaluate Them. [Ch.’s 4 & 14](#)
- Module 5: Research Ethics. [Ch. 3](#)

## Unit 2. Non-Experimental Research Designs.

- Module 1: Measurement [Ch. 5](#)
- Module 2: Correlational Research
- Module 3: Survey Research [Ch. 7](#)
- Module 4: Observational Research [Ch. 6](#)

## Unit 3. Experimental Research Designs.

- Module 1: Single Factor Designs [Ch's. 8 & 9](#)
- Module 2: Factorial Designs [Ch. 10](#)
- Module 3: Quasi-Experimental Designs [Ch. 11](#); also read [Walton \(2013\)](#) and [Colquhoun & Novella \(2013\)](#) as prep for a class discussion ([available on Avenue to Learn](#))

## **TUTORIALS: Topics and Readings.**

### Unit 1. Foundational Concepts in Research Methods.

- Tutorial 1 (week of Sept 12<sup>th</sup>): Introductory stuff.
  - [Reading: Colquhoun & Novella \(2013\)](#), available on [Avenue to Learn](#)
- Tutorial 2 (week of Sept 19<sup>th</sup>): Empiricism vs. the rest.
- Tutorial 3 (week of Sept 26<sup>th</sup>): Theory-data cycle.
- Tutorial 4 (week of Oct 3<sup>rd</sup>): Making claims.
  - [Readings: Colquhoun & Novella \(2013\)](#), and [Bakalar \(2016\)](#), available on [Avenue to Learn](#)

### Unit 2. Non-Experimental Research Designs.

- Tutorial 5 (week of Oct 17<sup>th</sup>): Design a survey.
- Tutorial 6 (week of Oct 24<sup>th</sup>): Fix your survey.
- Tutorial 7 (week of Oct 31<sup>st</sup>): Observational research.
- Tutorial 8 (week of Nov 7<sup>th</sup>): Interpreting cross-lagged correlations and multiple regression results.

### Unit 3. Experimental Research Designs.

- Tutorial 9 (week of Nov 14<sup>th</sup>): Experimental control.
  - [Reading: de Bruin, van der Zwan & Bögels \(2016\)](#), available on [Avenue to Learn](#)
- Tutorial 10 (week of Nov 21<sup>st</sup>): Design a true experiment.
- Tutorial 11 (week of Nov 28<sup>th</sup>): PRESENTATIONS
- Tutorial 12 (week of Dec 5<sup>th</sup>): Interpreting data from factorial designs.