

# PSYC\*2360, Course Outline: Winter 2019

## General Information

**Course Title: Psychological Methods and Statistics**

### **Course Description:**

This course is designed to provide students with a general introduction to scientific methods in the field of psychology. The course will cover important concepts, principles, and issues with both experimental and non-experimental research designs. By the end of this course, successful students will be able to:

- Identify, apply, and evaluate different research methods
- Critically evaluate scientific research
- Conduct a literature search and identify and summarize the relevant literature
- Develop research hypotheses and design a study to test their research hypotheses
- Write a research proposal

**Credit Weight:** 0.50

**Academic Department (or campus):** Department of Psychology

**Semester Offering:** W19

**Class Schedule and Location:** Mondays and Wednesdays 2:30pm-3:20pm; ROZH, 103

## Instructor Information

Instructor Name: Nick Hobson, PhD

Instructor Email: [nhobson@uoguelph.ca](mailto:nhobson@uoguelph.ca)

Office location and office hours: Mackinnon Ext. building 4022, Mondays 3:30pm-4:30pm

## GTA Information

GTA Name: Veesta Mavandad

GTA Email: [vmavanda@uoguelph.ca](mailto:vmavanda@uoguelph.ca)

Seminar Coordinator

Email for all seminar-related questions

GTA Name: Kelsy Ervin

GTA Email: [kervin@uoguelph.ca](mailto:kervin@uoguelph.ca)

Lab 01 (Tues 9:30am-10:20am)

MINS 037

GTA Name: Thomas Horman

GTA Email: [thorman@uoguelph.ca](mailto:thorman@uoguelph.ca)

Lab 02 (Tues 10:30am-11:20am)

MINS 037

GTA Name: Jessie Heaman

GTA Email: [jheaman@uoguelph.ca](mailto:jheaman@uoguelph.ca)

Lab 2 (Wed 3:30pm-4:20pm)

Lab 3 (Wed 4:30pm-5:20pm)

ANNU 204

GTA Name: Sarah Boyle  
GTA Email: [sboyle02@uoguelph.ca](mailto:sboyle02@uoguelph.ca)

Lab 4 (Thurs 9:30am-10:20am)  
MINS 037

GTA Name: Mackenzie Seasons  
GTA Email: [mseasons@uoguelph.ca](mailto:mseasons@uoguelph.ca)

Lab 5 (Thurs 10:30am-11:20am)  
MCKN 304

## **Course Content**

### **Specific Learning Outcomes:**

LO 1.3 – Problem Solving,  
LO 2.1 – information literacy,  
LO 2.2 – Methodological Literacy,  
LO 2.3 – Quantitative Literacy,  
LO 2.5 – Visual Literacy,  
LO 4.2 – Written Communication,  
LO 4.3 – Reading Comprehension,  
LO 5.3 – Ethical Issues in Research

### **Lecture Content:**

<b>Date</b>	<b>Topic and corresponding readings</b>	<b>Assignments, due dates for quizzes and Research in Action (RIA)</b>
Jan 7 <sup>th</sup> , 9 <sup>th</sup>	Week 1: Psychology as a science; scientific literacy <i>Chapter 1</i>	N/A
Jan 14 <sup>th</sup> , 16 <sup>th</sup>	Week 2: Research process, variables, and hypotheses <i>Chapter 2</i>	Quiz and RIA Week 2 Due: Jan 18 <sup>th</sup>
Jan 21 <sup>st</sup> , 23 <sup>rd</sup>	Week 3: Ethics within and beyond the lab <i>Chapter 3</i>	Quiz and RIA Week 3 Due: Jan 25 <sup>th</sup>
Jan 28 <sup>th</sup> , 30 <sup>th</sup>	Week 4: Reproducibility and replication crisis in psychology <i>Supplemental reading:</i> <a href="http://science.sciencemag.org/content/sci/349/6251/aac4716.full.pdf">http://science.sciencemag.org/content/sci/349/6251/aac4716.full.pdf</a>  <a href="https://www.theatlantic.com/science/archive/2018/11/psychologys-replication-crisis-real/576223/">https://www.theatlantic.com/science/archive/2018/11/psychologys-replication-crisis-real/576223/</a>	
Review Feb 4 <sup>th</sup> Midterm Feb 6 <sup>th</sup>	Week 5: Midterm review session + Midterm	Midterm February 6 <sup>th</sup> during class time

<b>Date</b>	<b>Topic and corresponding readings</b>	<b>Assignments, due dates for quizzes and Research in Action (RIA)</b>
Feb 11 <sup>th</sup> , 13 <sup>th</sup>	Week 6: Observational research and coding procedures <i>Chapter 6</i>	Quiz and RIA Week 6 Due: Feb 15 <sup>th</sup>  Plan for research proposal Due: Feb 11 <sup>th</sup> , 11:59PM
Feb 18 <sup>th</sup> , 20 <sup>th</sup>	No classes – reading week	N/A
Feb 25 <sup>th</sup> , 27 <sup>th</sup>	Week 7: Survey and questionnaire design <i>Chapter 7</i>	Quiz and RIA Week 7 Due: Feb 29 <sup>th</sup>
Mar 4 <sup>th</sup> , 6 <sup>th</sup>	Week 8: One-way designs (within- and between-subjects designs) <i>Chapters 8 &amp; 10</i>	Quiz and RIA Week 8 Due: Mar 8 <sup>th</sup>
Mar 11 <sup>th</sup> , 13 <sup>th</sup>	Week 9: Factorial design and interaction effects <i>Chapter 11</i>	Quiz and RIA Week 9 Due: Mar 15 <sup>th</sup>
Mar 18 <sup>th</sup> , 20 <sup>th</sup>	Week 10: Mixed design <i>Chapter 12</i>	Quiz and RIA Week 10
Mar 25 <sup>th</sup> , 27 <sup>th</sup>	Week 11: Priming and implicit procedures <i>Supplemental reading:</i> <a href="http://blogs.discovermagazine.com/neuroscience/2016/10/13/social-priming-works-after-all/#.XBgU0VxKjIU">http://blogs.discovermagazine.com/neuroscience/2016/10/13/social-priming-works-after-all/#.XBgU0VxKjIU</a>  <a href="https://www.thecut.com/2017/01/psychology-racism-measuring-tool-isnt-up-to-the-job.html">https://www.thecut.com/2017/01/psychology-racism-measuring-tool-isnt-up-to-the-job.html</a>	
April 1 <sup>st</sup> , 3 <sup>rd</sup>	Week 12: Intervention and evaluation <i>Chapter 13</i>	Quiz and RIA Week 12 Due: April 5 <sup>th</sup>  Research Proposal Due Wed April 3 <sup>rd</sup> , 11:59 pm

### Seminars:

<b>Week of:</b>	<b>Seminar Goal</b> <i>*changes posted on CourseLink</i>	<b>Deadlines</b> <i>*All reflections completed in class</i>
January 7	<b>No Seminars</b>	
January 14	Research Planning - Topic & Question - Searching for and reading articles	Reflection 1
January 21	Introduction	Reflection 2

<b>Week of:</b>	<b>Seminar Goal</b> <i>*changes posted on CourseLink</i>	<b>Deadlines</b> <i>*All reflections completed in class</i>
January 28	Methods	Reflection 3
February 4	Research Plan Support Class	No Reflection Midterm February 6th
February 11	Results	Reflection 4 Plan for research proposal: Due Mon. Feb. 11th, 11:59 pm
February 18	<b>No Seminars (reading week)</b>	
February 25	Results Continued Plan Feedback Support Class	Reflection 5
March 4	Sample Paper Review	Reflection 6
March 11	Academic Writing	Reflection 7
March 18	APA 6 (In-text and formatting) Support Class	Reflection 8
March 25	References and Abstract Support Class	Reflection 9
April 1	<b>In-Class Office Hour</b>	Research Proposal: Due Wed April 3 <sup>rd</sup> , 11:59 pm

### Course Assignments and Tests:

<b>Assignment or Test</b>	<b>Due Date</b>	<b>Contribution to Final Mark (%)</b>	<b>Learning Outcomes Assessed</b>
Weekly online quizzes	Weekly quizzes due by 11:59 pm on Friday of the corresponding week.	10.5% <a href="#">(7@1.5%)</a> (drop the lowest)	A1-3; B1-3; C1-3; D1-2
Research in action (RIA)	Weekly assignments due by 11:59 pm on Sunday of the corresponding week.	10.5% <a href="#">(7@1.5%)</a> (drop the lowest)	A1-3; B1-3; C1-3; D1-2
Seminar reflections	Due in-class at the end of each seminar meeting	9%	A1-3; B1-3; C1-3; D1-2
Midterm exam	Wednesday February 6 <sup>th</sup> (during class) Weeks 1-4	20%	A1-3; B1-2; C1-3; D2

Plan for research proposal	Submitted on Dropbox: Monday February 11 <sup>th</sup> by 11:59 pm	5%	A1-3; B1-3; C1-2; D2
Research proposal	Submitted on Dropbox: Wed April 3 <sup>rd</sup> , 11:59 pm	20%	A1-3; B1-3; C1;C; D1-2
Final Exam	Thurs April 11 <sup>th</sup> , 8:30 -10:30 am	25%	A1-3; B1-3; C1-3; D1-2

**Final examination date and time:** April 11th, 8:30am-10:30am

**Final exam weighting:** 25%

[Examination Regulations](#)

## **Course Resources**

### **Required Texts:**

Lewandowski, G. W., Ciarocco, N. J., & Strohmets, D. B. (2016). *Discovering the Scientist Within: Research Methods in Psychology*. Worth Publishers, New York.

### **Other Resources:**

1. CourseLink Website. Lecture slides and seminar slides will be provided on the CourseLink website. Seminar slides will be posted after the conclusion of each week.
2. Launchpad software (included with text) is used to provide the Research in Action (RIA) assignments and quizzes.
  - The access code for Launchpad appears on the inside cover of the textbook.
  - Instructions on how to access Launchpad are provided on CourseLink. A representative will also be coming in to class on January 14<sup>th</sup> to discuss more in detail.

## **Course Policies**

**Attendance:** Regular attendance at lectures is strongly recommended. Although lectures will closely follow the presentation in the textbook, many students find the material challenging. My goal is to communicate key concepts in a clear and uncomplicated fashion.

**Effective time management is critical.** To succeed in this course, it is essential that you keep up with the readings, weekly quizzes research in action activities, and seminar reflections and

assignments. You should take a disciplined approach and attend lectures and seminars. You are encouraged to ask the professor and course coordinator questions when you are struggling.

**Late or missed deadlines:**

**For the plan for research proposal**, it is at the discretion of your TA as to whether they will accept late assignments. Please do not email the course instructor. **If an extension is granted**, the assignment should be submitted to the CourseLink Dropbox, on the extended due date. After the extension period has expired, 5% of the value of the report will be deducted for each additional day of delay. After 3 calendar days, the grade received will be 0%.

**For the research proposal**, late submissions will be penalized at a rate of 5% per day and will not be accepted after 1 week past the deadline. If there is a valid reason to require an extension (see above), a penalty may be avoided. In such a case, you must email requests for consideration to the course coordinator (vmavanda@uoguelph.ca), and you must cc' your TA in any such email.

**For the midterm**, in the event that a student misses the midterm exam due to documented medical, psychological or compassionate reasons, then the final exam will be count toward 45% of the final grade. If a student fails to provide appropriate grounds for academic consideration, the grade on the missed midterm will be 0.

**For the final exam**, Students who do not write the final examination should follow the University's procedures for requesting academic consideration (see below).

[Undergraduate Grading Procedures](#)

**Page Limits:**

Marks will be docked for exceeding the page limit on your research proposal and research plan. 5% deduction if longer than ½ page or more over the page limit

**Course Policy on Group Work:**

Each student is expected to complete all assignments on their own. If there is evidence that students are collaborating while completing online assessments, then those cases will be dealt with as per the regulations on Academic Misconduct. However, students are encouraged to form study groups in preparation for the graded assessments.

**Course Policy regarding use of electronic devices and recording of lectures:**

Electronic recording of classes is expressly forbidden without consent of the instructor. When recordings are permitted they are solely for the use of the authorized student and may not be reproduced, or transmitted to others, without the express written consent of the instructor.

[Undergraduate Grading Procedures](#)

## **University Policies**

### **Academic Consideration**

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons, please advise the course instructor in writing, with your name, id#, and e-mail contact. See the academic calendar for information on regulations and procedures for

Academic Consideration:

[Academic Consideration, Appeals and Petitions](#)

[Grounds for Academic Consideration](#)

### **Academic Misconduct**

The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community, faculty, staff, and students to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring.

University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection. Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

The Academic Misconduct Policy is detailed in the Undergraduate Calendar:

[Academic Misconduct Policy](#)

### **Accessibility**

The University of Guelph is committed to creating a barrier-free environment. Providing services for students is a shared responsibility among students, faculty and administrators. This relationship is based on respect of individual rights, the dignity of the individual and the University community's shared commitment to an open and supportive learning environment. Students requiring service or accommodation, whether due to an identified, ongoing disability or a short-term disability should contact [Student Accessibility Services](#) as soon as possible.

For more information, contact SAS at 519-824-4120 ext. 54335 or email [accessibility@uoguelph.ca](mailto:accessibility@uoguelph.ca) or the [Student Accessibility Services Website](#)

## Course Evaluation Information

Please refer to the [Course and Instructor Evaluation Website](#) .

### Drop date

The last date to drop one-semester courses, without academic penalty, is March 8<sup>th</sup>, 2019.

### Drop date

For regulations and procedures for Dropping Courses, see the [Schedule of Dates in the Academic Calendar](#).  
[Current Undergraduate Calendar](#)

## Additional Course Information

### 1. Weekly Quizzes and Research in Action activities.

You should plan to spend at least 5 hours in addition to class and seminar time doing your readings and assessments. The deadline to receive grades on the online assignments is 11:59 pm on the Friday at the end of the assigned week. You may attempt each quiz an unlimited number of times. However, your grade will be the **higher score of the first two attempts**.

### 2. Seminars

You will attend and participate in approximately 10 seminars. Seminars are essential in learning how to develop a research plan and write a proposal. During the seminars, you will work on the following collaborative learning activities:

- Learn how to conduct a library search for journal articles
- Find out the structure of psychology journal articles
- Create research questions and hypotheses
- Participate in self-reflection exercise about your learning in research methods
- Learn how to write an introduction, methods, and results section for a research paper

### Seminar Reflections

At the end of each weekly seminar, students will submit a completed seminar reflection to their course TA. These reflections will help students identify their topics of interest, explore research ideas, and clarify course concepts. Seminar reflections will be marked on the basis of completion and demonstration of exploration of course concepts (0, 1, or 2). Students will be asked to complete 9 reflections with the option of dropping their lowest grade to ultimately count towards 9% of the final grade.



### 3. Plan for Research Proposal

Working individually students will develop a plan for their research proposal that outlines your current plan for your research proposal, including: 1) Your general topic of interest, 2) Your research question or questions, 3) The identified variables of interest, 4) Operational definitions for the identified variables of interest, 5) General description of proposed methodology, and 6) a list of five related peer reviewed journal articles. APA Referencing is not *yet* required. Maximum two pages double spaced (not including list of references).

### 4. Research Proposal

Working individually, students will prepare a research paper which outlines the justification and methodology for a research project. While the project is not actually conducted, a results section is to be written as if the project was completed. APA guidelines for scientific writing will be followed and a detailed rubric will be provided.

### 5. Midterm

The midterm exam will comprise 40 multiple-choice questions similar to those on the weekly quizzes. The midterm will cover material from the first four lectures (and corresponding readings).

### 6. Final Exam

The final exam will comprise 60 multiple-choice questions similar to those on the weekly quizzes. It will be non-cumulative and cover the remaining lecture weeks (and corresponding chapters/readings).