



**PSYCHOLOGY 270**  
 Introduction to Research Methods and Design:  
*How to Ask and Answer Questions in Psychology*

(PSYO 270)  
 Winter 1, 2019

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University of British Columbia, Okanagan Campus  
 Tuesday/Thursday, 12:30-2:00pm  
 ADM 026

INSTRUCTOR, CO-INSTRUCTORS, & PROJECT ADVISORS

Instructor:	Derrick Wirtz, Ph.D. ( <a href="mailto:derrick.wirtz@ubc.ca">derrick.wirtz@ubc.ca</a> )	
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Co-Instructors:	Morgyn Ahlefeld ( <a href="mailto:m.ahlefeld@alumni.ubc.ca">m.ahlefeld@alumni.ubc.ca</a> ) Jordyn Cates ( <a href="mailto:jcates@mail.ubc.ca">jcates@mail.ubc.ca</a> ) Anne Tseu ( <a href="mailto:atseu836@mail.ubc.ca">atseu836@mail.ubc.ca</a> )	
Office Hours:	Monday, 4:00pm-5:00pm, ART 336, (Jordyn) Wednesday, 4:00pm-5:00pm, ART 336 (Morgyn) Monday, 12:00pm-1:00pm ART 336 (Anne)	
Project Advisors:	Andrea Marvel Jaedyn Poffenroth Michael Mandarino Kaitlin Hepfner	Alex Burke Michelle Tucsook Erin Fraser Chelsea Bicknell Braxtyn Horbay
SL Leader:	Tyleigh Massey-Leclerc	

Overview

In this course, you will learn to ask and answer questions in psychology by getting hands-on experience and by designing a research project of your own with a team. Class meetings will alternate between giving you the background knowledge needed to understand, critically evaluate, and do successful research in psychological science and allowing you to apply those skills to the development, analysis, and presentation of a research project.



**Textbook:**

Price, P. C., Jhangiani, R. S., & Chiang, I. A. (2015). *Research Methods in Psychology* (2<sup>nd</sup> Canadian edition). This is a free, open-access textbook which can be viewed online or downloaded in a variety of formats. URL: <https://opentextbc.ca/researchmethods/>.

**Detailed Course Description and Objectives:**

This course is designed to introduce you to the philosophy of science and inquiry in psychology. We will accomplish this by combining traditional classroom lectures and discussions with class meetings that have an applied focus, in which you will complete research studies illustrating key research designs, learn and practice concepts from lectures and course readings, and ultimately conduct your own research project. Our course objectives include:

1. Understanding of research methods and design in psychological science, including the concepts of research ethics, validity and reliability, measurement, single and multiple-variable research techniques, survey design, and data analysis and interpretation.
2. Increased familiarity with scientific writing and reporting results in APA format.
3. Proposing a research idea (specification of a testable research idea, develop testable hypotheses).
4. Development of a research study (choosing the appropriate research design to test specific hypotheses; ethical guidelines; data management).
5. Analysis and interpretation of research results.
6. Professional conference-style presentation of research.
7. Critical evaluation of research and everyday claims.

**Research Project:**

Through class meetings with Dr. Wirtz and the co-instructors, you will receive guidance in developing a testable hypothesis and research plan. Your research project must be designed with a few specifications that are essential to making the project possible within our course structure. First, your research project must fit on the front side of one 8.5 x 11 sheet of paper. Second, you have two options for your study design: (1) one independent variable, 2 levels, or (2) two independent variables, two levels each. These designs will be discussed in class, in your textbook, and you will practice each one in class. Additional study specifications (e.g., number and type of dependent variables) will be described in class. We will do everything we can to help you examine a question that you are interested in knowing more about and producing research that will provide you with an initial answer to that question.

**Course Requirements:**

You will be evaluated based on the requirements below. The dates of exams and assignments are provided in the weekly schedule in this syllabus. All assignments and exams must be completed on time, unless prior approval has been obtained from your instructor.

**Applied Research Project (40%)**

- A major portion of your course grade depends on the completion of a class research project. Since a research project is a major undertaking, you will earn these marks one week at a time. Your research project will consist of iterative assignments (totaling 25%) that build on each other and a conference-style poster and presentation (15%). Some assignments will be completed during class time, others outside of class time. Also, some assignments will be



completed in teams, while others will be individual. Assignments are provided during class and are generally either completed during class time (In-Class Assignments) or outside of class time (Take-Home Assignments). To receive credit for a team assignment, you must be present and participating in your team. Team assignments cannot generally be made up; you will be allowed to miss 1 assignment without negatively affecting your course grade; however, you are strongly encouraged to participate in all team assignments. See Daily Schedule for Assignments/Dates.

- Your research team will make a professional conference-style **poster presentation** of your results in late November (see Daily Schedule). At random, half of the class will be assigned to present on one day and the other half on another day (presentations are scheduled during class time). On either day, the half of the class that is not presenting will be the audience and will complete individual in-class assignments based on their observations and interactions. All team members will have pre-determined, specific roles in the presentation of the poster; therefore, attendance is mandatory for all team members.
- Exams (60%)  
There will be two midterm exams (18% each) covering class and textbook content, plus any assigned readings, and one cumulative final exam (24%). Exams are typically a combination of multiple-choice and short-answer or long-answer items. The dates and coverage of these exams are indicated on the syllabus. If you cannot make one of the scheduled tests, you must let your instructor know prior to the test. If you have any questions regarding potential conflicts, please come and see me immediately. Reading the textbook will be quite helpful in achieving a good grade on the tests in addition to regular class attendance.

GRADING

UBC GRADING SCALE

Research Project:	40%	90-100 = A+
Exam 1:	18%	85-89 = A
Exam 2:	18%	80-84 = A-
Final Exam:	24%	76-79 = B+
		72-75 = B
		68-71 = B-
		64-67 = C+
		60-63 = C
		55-59 = C-
		50-54 = D
		00-49 = F



## UBC OKANAGAN POLICIES

### Final Examinations

The examination period for 2016/17 Term 1 is December 5 - 20, 2016. Except in the case of examination clashes and hardships (three or more formal examinations scheduled within a 24-hour period) or unforeseen events (such as ill health or other personal challenges that arise during a term or changes in the requirements of an ongoing job) students are not be permitted to apply for out-of-time final examinations unless they are representing the University, the province, or the country in a competition or performance; serving in the Canadian military; observing a religious rite; working to support themselves or their family; or caring for a family member. Further information on Academic Concessions can be found under Policies and Regulation in the Okanagan Academic Calendar

<http://www.calendar.ubc.ca/okanagan/index.cfm?tree=3.48.0.0>

### Academic Integrity

The academic enterprise is founded on honesty, civility, and integrity. As members of this enterprise, all students are expected to know, understand, and follow the codes of conduct regarding academic integrity. At the most basic level, this means submitting only original work done by you and acknowledging all sources of information or ideas and attributing them to others as required. This also means you should not cheat, copy, or mislead others about what is your work. Violations of academic integrity (i.e., misconduct) lead to the breakdown of the academic enterprise, and therefore serious consequences arise and harsh sanctions are imposed. For example, incidences of plagiarism or cheating may result in a mark of zero on the assignment or exam and more serious consequences may apply if the matter is referred to the President's Advisory Committee on Student Discipline. Careful records are kept in order to monitor and prevent recurrences.

A more detailed description of academic integrity, including the University's policies and procedures, may be found in the Academic Calendar at <http://okanagan.students.ubc.ca/calendar/index.cfm?tree=3.54.111.0>.

### UBC Okanagan Disability Resource Centre

The Disability Resource Centre ensures educational equity for students with disabilities, injuries or illness. If you are disabled, have an injury or illness and require academic accommodations to meet the course objectives, please contact Earlene Roberts, the Diversity Advisor for the Disability Resource Centre. Location: UNC227A; Telephone: 250.807.9263; email [earlene.roberts@ubc.ca](mailto:earlene.roberts@ubc.ca);

Web: [www.ubc.ca/okanagan/students/drc](http://www.ubc.ca/okanagan/students/drc)

### UBC Okanagan Ombuds Office

The Ombuds Office offers independent, impartial, and confidential support to students in navigating UBC policies, processes, and resources, as well as guidance in resolving concerns related to fairness.

UBC Vancouver Ombuds Office: email: [ombuds.office@ubc.ca](mailto:ombuds.office@ubc.ca)

Web: [www.ombudsoffice.ubc.ca](http://www.ombudsoffice.ubc.ca)

### UBC Okanagan Equity and Inclusion Office

UBC Okanagan is a place where every student, staff and faculty member should be able to study and work in an environment that is free from discrimination and harassment. UBC prohibits discrimination and harassment on the basis of the following grounds: age, ancestry, colour, family status, marital status, physical or mental disability, place of origin, political belief, race, religion, sex, sexual orientation or unrelated criminal conviction. If you require assistance related to an issue of equity, discrimination or harassment, please contact the Equity and Inclusion Office.

Location: UNC 227C; telephone: 250.807.9291; email: [equity.ubco@ubc.ca](mailto:equity.ubco@ubc.ca); Web: [www.equity.ok.ubc.ca](http://www.equity.ok.ubc.ca)

### Health & Wellness

At UBC Okanagan health services to students are provided by Health and Wellness. Nurses, physicians and counsellors provide health care and counselling related to physical health, emotional/mental health and sexual/reproductive health concerns. As well, health promotion, education and research activities are provided to the campus community. If you require assistance with your health, please contact Health and Wellness for more information or to book an appointment.

Web: [www.students.ok.ubc.ca/health-wellness](http://www.students.ok.ubc.ca/health-wellness)

### SAFEWALK

Don't want to walk alone at night? Not too sure how to get somewhere on campus? Call Safewalk at 250-807-8076.

For more information, see: [www.security.ok.ubc.ca](http://www.security.ok.ubc.ca).



PSYO 270 Daily Schedule (WINTER 1, 2019)

Note: Readings come from Research Methods in Psychology by Price, Jhangiani, & Chiang (2015). Additional readings will be distributed in class and/or through Connect. All assignments are to be completed individually unless noted as team assignments.

Week 1 (September 2-6)	
TUESDAY	No Class – UBC CREATE Orientation
THURSDAY	<u>Topic:</u> Why Do Research? <u>Reading:</u> Syllabus, Chapter 1 – The Science of Psychology <u>Take-Home Assignment:</u> My Research Interests (Individual)

Week 2 (September 9-13)	
TUESDAY	<u>Topic:</u> Getting Inspired by Research <u>Reading:</u> Chapter 2 – Getting Started in Research The <a href="#">Replication Crisis</a>
THURSDAY	<u>Topic:</u> “ <a href="#">What Google Learned from Its Quest to Build the Perfect Team</a> ”; Initial Team Meetings <u>In-Class Assignment:</u> LAB 1 - Rough Project Idea (Team) <u>Take-Home Assignment:</u> Searching the Literature (Individual)

Week 3 (September 16-20)	
TUESDAY	<u>Topic:</u> How to Design an Experiment in Psychology <u>Read:</u> Chapter 6 – Experimental Research
THURSDAY	<u>Topic:</u> Guidelines for Team Experiments <u>In-Class Assignment:</u> LAB 2 - Refined Project Idea & Rough Materials (Team) <u>Take-Home Assignment:</u> Replication Experiment 1 (Individual)

Week 4 (September 23-27)	
TUESDAY	<u>Topic:</u> Survey Do-s and Don'ts <u>Read:</u> Chapter 9 – Survey Research <u>Due Today:</u> Replication Experiment 1 (Individual); 12:30pm



THURSDAY	<p><u>Topic:</u> Analysis of Replication Experiment 1 – How Do We Know if it Worked?  <u>Read:</u> Chapter 12 – Descriptive Statistics  <u>In-Class Assignment:</u> Descriptive Analysis (Individual);  LAB 3 - Second-Draft Materials (Team)</p>
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Week 5 (September 30-October 4)	
TUESDAY	Exam 1 (Chapters 1, 2, 6, 9, 12, <a href="#">Replication article</a> )
THURSDAY	<p>Analysis of Replication Experiment 1 Revisited – How Do You Know if it Worked, Part 2 (Inferential Statistics)  <u>Read:</u> Chapter 13 – Inferential Statistics  <u>In-Class Assignment:</u> Inferential Analysis (Individual);  LAB 4 - Third-Draft Materials (Team)  <u>Take-Home Assignment:</u> Replication Experiment 2 (Individual)</p>

Week 6 (October 7-11)	
TUESDAY	<p><u>Topic:</u> Adding Another Variable: Factorial Research Designs  <u>Read:</u> Chapter 8 – Complex Research Designs  <u>Due Today:</u> Replication Experiment 2 (Individual)</p>
THURSDAY	<p><u>Topic:</u> Intro to Replication Experiment 2 &amp; Descriptive Analysis  <u>In-Class Assignment:</u> Descriptive Analysis (Individual);  Recognizing and Describing Statistical Interactions (Team)  <u>Take-Home Assignment:</u> LAB 5 - Final Draft of Materials (Team)</p>

Week 7 (October 14-18)	
TUESDAY	<p><u>Topic:</u> The Ethics of Psychological Science  <u>Read:</u> Chapter 3  <u>Due Today:</u> Final Draft Materials (Team)  <u>Take-Home Assignment:</u> Tri-Council Ethics Tutorial – Individ. (Due Oct 25)</p>
THURSDAY	<p><u>Topic:</u> Analysis of Replication Experiment 2  <u>In-Class Assignment:</u> Inferential Analysis (Individual);  LAB 6 - Preparing for Data Analysis of Class Projects (Team)</p>



Week 8 (October 21-25)	
TUESDAY	<u>Topic:</u> Nothing So Practical as a Good Theory? The Role of Theory in Psychological Science; The College Sophomore Problem <u>Read:</u> Chapter 4; Stanovich – The Artificiality Criticism and Psychology
THURSDAY	<u>Topic:</u> Thinking Ahead: What Will Your Results Show? <u>In-Class Assignment:</u> LAB 7 - Hypothesized Results and Practice Analysis (Team) <u>Due:</u> Tri-Council Ethics Tutorial (Individual)

Week 9 (October 28-November 1)	
TUESDAY	<u>Topic:</u> How to Make Sure Your Project is Valid & Reliable <u>Read:</u> Chapter 5 – Identifying Good Measurement
THURSDAY	<u>Topic:</u> Team Projects Data Collection <u>In-Class Assignment:</u> LAB 8 – Data Collection (Individual)

Week 10 (November 4-8)	
TUESDAY	Exam 2 (Chapters 3, 4, 5, 8, & 13 + Stanovich Chapter)
THURSDAY	<u>Topic:</u> Data Entry & Analysis <u>In-Class Assignment:</u> LAB 9 - Entering and Analyzing Your Data & Interpreting Your Results (Team)

Week 11 (November 11-15)	
TUESDAY	No Class – Midterm Break
THURSDAY	<u>Topic:</u> Presenting Your Research to the World <u>Read:</u> Chapter 11 – Presenting Your Research <u>In-Class Assignment:</u> LAB 10 - Powerpoint Poster Presentation, First Draft (Team)



Week 12 (November 18-22)	
TUESDAY	<u>Topic:</u> Poster Presentations <u>In-Class Assignment:</u> LAB 11 - Powerpoint Poster Presentation, Second Draft (Team) <u>Take-Home Assignment:</u> Poster Presentation, Final Draft (Team)
THURSDAY	<u>Topic:</u> Looking Back/Looking Forward <u>In-Class Assignment:</u> LAB 12 – Presentation Roles & Rehearsal Final Poster Due (Team)

Week 13 (November 25-29)	
TUESDAY	Poster Presentations 1 <u>In-Class Assignment:</u> Presentation Notes (Individual)
THURSDAY	Poster Presentations 2 <u>In-Class Assignment:</u> Presentation Notes (Individual)

Final Exams	
Cumulative FINAL EXAM - To Be Announced	

Note: This syllabus is subject to change. Alterations to the syllabus will be announced in class and/or through the course website. I am looking forward to a great semester of research!!!