



Research Methods & Statistics PSYO 372-3 / Winter Term 1, 2019

INSTRUCTOR:	Kimberley Kaseweter, MSc – Psych Science PhD Student Email: Kimberley.Kaseweter@ubc.ca Office: ARTS 280L Office Hours: After class or by appointment
TIME & LOCATION:	CLASS Tuesday & Thursday 12:30pm–2:00pm - ARTS 219 LAB Thursday 5:30pm–8:30pm - ARTS 215
TEACHING ASSISTANTS:	Stefanie Ciszewski, MA – Clinical Psychology PhD Student (LAB) Email: sciszews@mail.ubc.ca Office: ASC 201 Office hours: By appointment Zak Draper, MA - Psych Science PhD Student (LAB) Email: Zakary.Draper@ubc.ca Office: ART 280H Office hours: By appointment Nina Gregoire, BSc - Psych Science MA Student (CLASS) Email: Nina.Gregoire@ubc.ca Office: ART 280L Office hours: Monday (3:30-4:30pm) & Tuesday (8:30-9:30am)

READINGS:

- Field, A. (2012). *Discovering statistics using R*. Los Angeles, CA: Sage.
- American Psychological Association. (2010). *Publication manual of the American Psychological Association* (6th ed.). Washington, DC: Author. *[Optional as 7th edition releasing in October]*
- Journal Articles (See Page 4)

LEARNING OBJECTIVES:

- Identify and apply appropriate statistical procedures for various research designs.
- Analyze data using *R*.
- Report and interpret statistical findings using APA.
- Design a research proposal from start to finish.

FORMAT:

- This course will be taught primarily using the lecture method in combination with laboratory sessions. Additionally, there will be seminar-style classes with required article readings that will be discussed by the class.



- Attendance at the lecture and labs is expected; students, in the past, have experienced **considerable** difficulty in the course when classes have been missed. If you have to miss a class, you should get the notes from another student.

MISSED ASSIGNMENTS/EXAMS:

- In-class examinations **must** be written during the designated times. If an exam is to be missed for a legitimate reason, I must be contacted *before* the exam. Failure to do so may mean that you will not be allowed to write the exam.
- Late lab assignments will be **reduced by 5%** for each day [or part thereof] they are late.
- There will be **no make-ups** for missed lab quizzes, in-class exercises, or lab assignments.

EVALUATION:

CLASS (70%):

- 1) Class Midterm (20%):**
 - Closed Book Exam
 - Multiple Choice/Short Answer questions
 - 1.5 hours
- 2) Research Proposal (25%):**
 - Brief research proposal (2-3 pages single space + references)
 - Completed pre-registration form
 - Curriculum Vitae
- 3) In-Class Exercises (5%):**
 - **Requires** class attendance
 - 1% each – 6 Activities – Max 5%
- 4) Class Final (20%):**
 - Closed Book Exam
 - Multiple Choice/Short Answer questions
 - 2 hours

LAB (30%):

- 5) Lab Assignments (10%):**
 - Three lab assignments: Two worth 3% each & one worth 4%
 - Submitted online to Canvas
- 6) Quizzes (10%):**
 - Six quizzes: Top 5 marked at 2% each
 - Completed at start of lab via Canvas
- 7) Lab Exam (10%):**
 - Open-book computer exam
 - 3 hours

RESEARCH BONUS CREDIT (SONA):

Bonus marks (up to 2%) are available to students who participate in psychological research through SONA. You are strongly encouraged to participate as this opportunity will allow you to assist researchers, earn bonus marks, and experience what it is like to be in a study (See pages 7-8 for more details)

GRADING:

90 -100	A+	76 – 79	B+	64 – 67	C+	50 – 54	D
85 – 89	A	72 – 75	B	60 – 63	C	0 – 49	F (fail)
80 – 84	A-	68 – 71	B-	55 – 59	C-		



TENTATIVE SCHEDULE: *Topics and dates may change*

Week	DATES	TOPICS	READING (Field or Article)
1	09/05	(No Class – Lab Only)	
	Lab # 1	Course Introduction / Intro to R	Chapter 3
2	09/10	Introduction	Chapter 1
	09/12	Introduction	Chapter 2
	Lab # 2	R-Basics	Chapter 3
3	09/17	Proposal	
	09/19	Project Pre-Registration	Article #1
	Lab #3	Assumptions and Graphs Lab	Chapters 4 & 5
4	09/24	Bivariate Correlation	Chapter 6 (6.1-6.5)
	09/26	Correlation Seminar/Activity	Article #2
	Lab #4	Bivariate Correlation Lab*	
5	10/01	Simple Regression	Chapter 7 (7.1-7.5)
	10/03	Regression Seminar /Activity	Article #3 & 4
	Lab #5	Simple Regression Lab	
6	10/08	T-tests	Chapter 9
	10/10	T-test Seminar/Activity	Article #5
	Lab #6	T-tests Lab *	
7	10/15	ANOVA	Chapter 10
	10/17	ANOVA Seminar/Activity	Article #6
	Lab #7	ANOVA Lab	
8	10/22	Questionable Research Practices	Article #7
	10/24	Review	
	Lab #8	LAB MIDTERM	
9	10/29	CLASS MIDTERM	
	10/31	ANCOVA	Chapter 11 & Article #8
	Lab #9	ANCOVA Lab	
10	11/05	Factorial ANOVA	Chapter 12
	11/07	Factorial Seminar/Activity	Article #9
	Lab #10	Factorial ANOVA Lab *	
11	11/12	(No Class – Midterm Break)	
	11/14	Repeated Measures ANOVA	Chapter 13
	Lab #11	Repeated Measures Lab	
12	11/19	Repeated Measures Seminar/Activity	Article #10
	11/ 21	Non-Parametric	Chapter 15
	Lab #12	Non-Parametric Lab	
13	11/26	Categorical Data	Chapter 18
	11/28	Categorical Seminar	Article #11 & 12
	Lab #13	Categorical Data	
14	12/02 – 12/17	CLASS FINAL EXAM	

*Lab Assignments due on the following Thursday before lab



Tentative Journal Article List:

Reading	Article Reference
1	Lindsay, D. S., Simons, D. J., & Lilienfeld, S. O. (2016). Research preregistration 101. <i>APS Observer</i> , 29(10). https://www.psychologicalscience.org/observer/research-preregistration-101
2	Book, A., Costello, K., & Camilleri, J. A. (2013). Psychopathy and victim selection: The use of gait as a cue to vulnerability. <i>Journal of Interpersonal Violence</i> , 28(11), 2368-2383.
3	Marco, C. A., Plewa, M. C., Buderer, N., Hymel, G., & Cooper, J. (2006). Self-reported pain scores in the emergency department: lack of association with vital signs. <i>Academic Emergency Medicine</i> , 13(9), 974-979.
4	Peteet, B. J., Brown, C. M., Lige, Q. M., & Lanaway, D. A. (2015). Impostorism is associated with greater psychological distress and lower self-esteem for African American students. <i>Current Psychology</i> , 34(1), 154-163.
5	Dekker, H., Snoek, J. W., Schönrock-Adema, J., van der Molen, T., & Cohen-Schotanus, J. (2013). Medical students' and teachers' perceptions of sexual misconduct in the student–teacher relationship. <i>Perspectives on Medical Education</i> , 2(5-6), 276-289.
6	Bushman, B. J. (2018). Guns automatically prime aggressive thoughts, regardless of whether a “good guy” or “bad guy” holds the gun. <i>Social Psychological and Personality Science</i> , 9(6), 727-733.
7	John, L. K., Loewenstein, G., & Prelec, D. (2012). Measuring the prevalence of questionable research practices with incentives for truth telling. <i>Psychological science</i> , 23(5), 524-532.
8	Miller, G. A., & Chapman, J. P. (2001). Misunderstanding analysis of covariance. <i>Journal of Abnormal Psychology</i> , 110(1), 40.
9	Modić-Stanke, K., & Ivanec, D. (2016). Pain threshold: Measure of pain sensitivity or social behavior?. <i>Psihologija</i> , 49(1), 37-50.
10	Ainley, V., Maister, L., Brokfeld, J., Farmer, H., & Tsakiris, M. (2013). More of myself: manipulating interoceptive awareness by heightened attention to bodily and narrative aspects of the self. <i>Consciousness and Cognition</i> , 22(4), 1231-1238.
11	Lyle, C., Karr, J., & Craig, R. A. (2014). Effects of Media Portrayal on Mock Jurors' Use of Deceptive Polygraph Evidence. <i>Polygraph</i> , 43(1), 30.
12	Strömwall, L. A., Landström, S., & Alfredsson, H. (2014). Perpetrator characteristics and blame attributions in a stranger rape situation. <i>The European Journal of Psychology Applied to Legal Context</i> , 6(2), 63-67.



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>

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 Earllene Roberts, the Diversity Advisor for the Disability Resource Centre located in Commons Corner in the University Centre building (UNC 227). UNC 227A 250.807.9263 email earllene.roberts@ubc.ca Web: <http://students.ok.ubc.ca/drc/welcome.html>

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. UNC 227B 250.807.9818 email: ombuds.office.ok@ubc.ca Web: <https://www.ubcsuo.ca/services-ombudsperson>

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. UNC 227C 250.807.9291 email: equity.ubco@ubc.ca Web: <https://equity.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: <https://security.ok.ubc.ca/safewalk/>

SVPRO:

- A safe and confidential place for UBC students, staff and faculty who have experienced sexual violence regardless of when or where it took place. Just want to talk? We are here to listen and help you explore your options. We can help you find a safe place to stay, explain your reporting options (UBC or police), accompany you to the hospital, or support you with academic accommodations. You have the right to choose what happens next. We support your decision, whatever you decide. Visit svpro.ok.ubc.ca or call us at 250.807.9640

IIO:

- If you or someone you know has experienced sexual assault or some other form of sexual misconduct by a UBC community member and you want the Independent Investigations Office (IIO) at UBC to investigate, please contact the IIO. Investigations are conducted in a trauma informed, confidential and respectful manner in accordance with the principles of procedural fairness. You can report your experience directly to the IIO via email: director.of.investigations@ubc.ca or by calling 604.827.2060 or online by visiting investigationsoffice.ubc.ca



SONA BONUS MARKS – RESEARCH ACTIVITY

Students earn Sona credit from participating in research activity. This can be either through direct participation in research through the Sona online volunteer subject pool (Option 1), by completing summaries of primary research articles (Option 2), or by a combination of the two types of activities.

Research Participation (Option 1)

As a participant in one of numerous Psychology Department Subject Pool experiments posted at <http://ubco.sona-systems.com/>, you will obtain 0.5% credit for each 0.5 hour of participation at UBCO. Hence, participation requiring a 1-hour time commitment provides a credit of 1%, 1.5 hours provides a credit of 1.5%, and 2 hours provides a credit of 2.0%, etc.

Important Requirements

You may participate in more than one experiment in order to accrue credits. In order to ensure that a variety of research methodologies are experienced, ***at least one [1] of the credit hours must be earned by participating in online questionnaires and at least one [1] of the remaining credit hours must be fulfilled by participating in the university's on-site studies.*** In the event that you participate in a single listed study offering *more* than three credits for participation (for PSYO 111/121) or a single listed study offering *more* than 1.5 credits for participation (for 2nd year and higher courses), this regulation will be waived. A substantial number of both types of studies are typically hosted on Sona; therefore, you will have many different choices.

It is important to sign up for experiments early in the semester in order to increase the odds that a time slot is available. If you wait until late in the semester, all time slots may be taken.

Logging On To The System

Sona is only open for those students who are registered in a psychology course offering Sona credit. Please only use the request account option if you have never used the Sona system before. If you have used the Sona system before, please use the most recent login information you remember to log in.

Missed Appointments & Penalties

Missed appointments (i.e., failure to cancel the appointment at least 3 hours prior to the session) will be tracked. The consequence will be that you will not receive credit for participation in the experiment and will lose the credit value of the study from possible marks associated with participation in research.

Please email psyc.ubco.research@ubc.ca with any questions or concerns that you may have regarding the Sona system, including unassigned bonus credits. Your professor does NOT have access to this information.



Research Summary Assignment (Option 2)

As an alternative to participating in a Psychology Subject Pool experiment, you may obtain subject pool credit by completing library-writing projects to a satisfactory level. Each library-writing project is worth a total of two credits.

Important Requirements

1. This project consists of reading and summarizing (in written form) a recent, peer-reviewed, primary research article.
 - A “recent” article has been published within the past 12 months.
 - A “peer reviewed” article is one that has been reviewed by other scholars before it is accepted – for example, it **cannot** be a news item, an article from a popular magazine, a notice, or a letter to the editor.
 - A “primary” research article describes an experiment or study where data are collected by the authors. In other words, the article you choose to review **cannot** be a book review, literature review, or summary article.
2. You must choose an article published by one of the following agencies:
 - The American Psychological Society - *Psychological Science*, *Current Directions in Psychological Science*, *Psychological Science in the Public Interest*, or *Perspectives on Psychological Science*.
 - The American Psychological Association - www.apa.org/journals/by_title.html has a full listing.
 - The Canadian Psychological Association - *Canadian Psychology*, *Canadian Journal of Behavioural Science*, or *Canadian Journal of Experimental Psychology*.
 - The Psychonomic Society - *Behavior Research Methods, Cognitive, Affective, & Behavioral Neuroscience*, *Learning & Behavior*, *Memory & Cognition*, *Perception & Psychophysics*, or *Psychonomic Bulletin & Review*.

3. Other Assignment Guidelines

The summary should be about 300-500 words in length. The source must be cited and referenced in accordance with the *Publication Manual of the American Psychological Association* (6th ed.). The review will be graded on a pass – fail basis (2% or 0%). At least **14 days before the end of classes** each term, submit the following to the course instructor:

- the article summary
- a copy of the article
- a cover page that specifies your name, student number, email address, and word count of the summary.
- the course title and number

Submitting the assignment 14 days in advance is necessary to ensure that you have an opportunity to make corrections, if required. If you do not check your email frequently, provide a phone number on the cover page.