

PSYC 302: Advanced Research Methods
Queen's University - Winter 2021
Miller 105

Lectures: Tuesdays 11:30am – 1:00pm; Fridays 1:00 - 2:30pm

Instructor : Dr. Tom Hollenstein (tom.hollenstein@queensu.ca)

Head TA: Tina Mihajlovic valentina.mihajlovic@queensu.ca

Assistant TA: Colleen Pearce(csp6@queensu.ca)

Lab Sections

Tuesday 2:30-5:30pm Lab section 002: Krista Jones: kmj7@queensu.ca

Wednesday 6:30pm-9:30pm lab section 005: Megan Wylie: megan.wylie@queensu.ca

Thursday 2:30-5:30pm lab section 004: Devin Fowlie: devin.fowlie@queensu.ca

Friday 2:30-5:30pm Lab section 003: Tina Mihajlovic valentina.mihajlovic@queensu.ca

Required Software: SPSS28 (free from Queen's ITS)

Recommended Texts:

Field, A., (2018). Discovering Statistics Using IBM SPSS Statistics(5th ed.). California: Sage Publications. YOU ALREADY HAVE THIS FOR PSYC301

Howitt, D., & Cramer, D., (2017). Introduction to SPSS in Psychology (7th ed.). United Kingdom: Pearson Education.

Abelson, R. P. (1995). Statistics as Principled Argument . Hillsdale, NJ: Laurence Earlbaum.

Pinker, S. (2014). The Sense of Style: The Thinking Person's Guide to Writing in the 21st Century . New York: Penguin

Tabachnick, B. G. & Fidell, L. S. (2012). Using Multivariate Statistics . New York: Pearson

****See also Excel file on onQ with list of free textbooks

Course Description

The primary purpose of this course is to prepare you to do an undergraduate thesis in PSYC501. To do this, you will need to know how to write a proposal, one of the most important forms of scientific communication. To know how to write a proposal, you will need to know how to connect theory with research questions with hypotheses with study design and measures with statistical tests. Statistically, we will cover the **concepts, procedures, and interpretations** of several multivariate methods.

Learning Objectives

By the end of the course you will be able to:

1. Comprehend the basics of multivariate statistical methods
2. Utilize statistical resources to understand variations and extensions of these methods
3. Conceptually link research questions to appropriate methods
4. Write a coherent research proposal

Electronic Considerations.

All course materials will be distributed through onQ . Please log in before January 13 to make sure that you have no problems with access.

We will be using SPSS for all analyses in this course. Currently, Queen's supports version 28. Downloading this version for yourself is required for the course and will be necessary for the first lab meeting.

EMAIL

If your question is about course content, then please use the onQ forum so that other students can see the answers and join the discussion. If you have a question or problem that is specific to only you, please email your lab TA or lecture TA first .

Turnitin

Queen's University has partnered with the third -party application Turnitin to help maintain our standards of excellence in academic integrity. Turnitin is a suite of tools that provide instructors with information about the authenticity of submitted work and facilitates the process of grading. Submitted files are compared against an extensive database of content, and Turnitin produces a similarity report and a similarity score for each assignment. A similarity score is the percentage of a document that is similar to content held within the database. Turnitin does not determine if an instance of plagiarism has occurred. Instead, it gives instructors the information they need to determine the authenticity of work as a part of a larger process. There is information on the course onQ site about Turnitin policies. See also privacy statement at: http://turnitin.com/en_us/about_us/privacy

Academic Integrity

Queen's students, faculty, administrators and staff all have responsibilities for upholding the fundamental values of academic integrity; honesty, trust, fairness, respect, responsibility and courage (see www.academicintegrity.org). These values are central to the building, nurturing and sustaining of an academic community in which all members of the community will thrive. Adherence to the values expressed through academic integrity forms a foundation for the "freedom of inquiry and exchange of ideas" essential to the intellectual life of the University (see the Senate Report on Principles and Priorities <http://www.queensu.ca/secretariat/policies/senate/report-principles-and-priorities>).

Students are responsible for familiarizing themselves with the regulations concerning academic integrity and for ensuring that their assignments and their behaviour conform to the principles of academic integrity.

development of an academic community at Queen's. Given the seriousness of these matters, actions which contravene the regulation on academic integrity carry sanctions that can range from a warning or the loss of grades on an assignment to the failure of a course to a requirement to withdraw from the university.

Plagiarism: Because this course requires the submission of original writing assignments, each student is responsible to know and understand what plagiarism is and how to avoid it. Regardless of how and where you retrieve information, the principles of academic integrity apply. Please visit these helpful websites to help you make sure that you are able to write things in your own words:

- <https://www.queensu.ca/academicintegrity/students/avoiding-plagiarismcheating>
- <https://integrity.mit.edu/handbook/academic-writing/avoiding-plagiarism-paraphrasing>
- [http://whand0\(T1 0 12 92.C-4\(p\)6.1\(w\)-64 Tc 061.5Tw 25.18 rn--9.1\(c\)1n/\(oi\)H\(s\)-2\(t\)9\(ab-1.9](http://whand0(T1 0 12 92.C-4(p)6.1(w)-64 Tc 061.5Tw 25.18 rn--9.1(c)1n/(oi)H(s)-2(t)9(ab-1.9)

<https://www.queensu.ca/secretariat/sites/webpublish.queensu.ca.uslcwww/files/files/policies/se>

Course Schedule

week	Date	Topic	Comments & Due Dates
1	T Jan. 10	Orientation	
	F Jan 13	The Basics & Overview	
		Lab 1: Orientation & Basics	Lab week starts Friday 13th
2	T Jan. 17	*501 INFO SESSION*	
	F Jan. 20	Data Management	
		Lab 2: Messy Data	
3	T Jan. 24	Data Reduction I	
	F Jan. 27	Data Reduction II	
		Lab 3: Data Reduction	
4	T Jan 31	The Art of the Proposal I	
	F Feb 3	GLM intro	Feb 3: Proposal critique
		Lab 4: PCA/Factor ing	
5	T Feb. 7	ANCOVA	
	F Feb. 10	MANOVA	
		Lab 5 ANCOVA & GLM	
6	T Feb. 14	MANOVA	
	F Feb. 17	NO CLASS	Feb 17: Homework 1
			No Friday lab
7	Feb 20-24	READING WEEK	
8	T Feb 28	The Art of the Proposal II	
	F Mar. 3	Repeated Measures	
		Lab 6: MANOVA	Lab week starts Tuesday
9	T Mar. 7	Mixed Models	
	F Mar. 10	Multiple Regression	Mar. 10: 1-page Proposal
		Lab 7: Repeated-measures	
10	T Mar. 14	Multiple Regression	
	F Mar. 17	Multiple Regression	Mar. 17: Peer Feedback
		Lab 8: Multiple Regression	
11	T Mar.21	The Art of the Proposal III	
	F Mar. 24	PROCESS macro	Mar. 24: Homework 2
		Lab 9: Moderat ion	
12	T Mar. 28	Logistic Regression	
	F Mar. 31	Multilevel Modeling	

Lab 10