PSYC 3102: Advanced Research Methods
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Monday 8:30 ± 9:50 Biosci 1103
Thursday 10:00 ± 11:20 Biosci 1103

Instructor: Dr. Tom Hollenstein (tom.hollenstein@queensu.ca; Craine 220

Coordinator TA: Cindy Xiao (11cpx@queensu.ca)
Head Lab TA: Simone Cunningham (16scc6@queensu.ca)

Lab Sections (Humphrey 219):
Tuesday 8:30 ± 11:30am lab section 005: Mohamed Albaghdadi (12ma73@queensu.ca)
Tuesday 11:30am ± 2:30pm lab section 004: Andrew Nguyen (nguyen.a@queensu.ca)
Tuesday 2:30 ± 5:30pm Lab section 003: Abi Muere (abigail.muere@queensu.ca)
Wednesday 8:30 ± 11:30am Lab section 002: Abi Muere (abigail.muere@queensu.ca)

Required Software: SPSS 24

Required Text:
Field, A., (2013). Discovering Statistics Using IBM SPSS Statistics (4th ed.). California: Sage Publications.
Howitt, D., & Cramer, D., (2014). Introduction to SPSS in Psychology (6th ed.). United Kingdom: Pearson Education.

Recommended Texts:
Abelson, R. P. (1995). Statistics as Principled Argument. Hillsdale, NJ: Laurence Earlbaum.
Pinker, S. (2014). The Sense of Style 7 K H 7 K L Q N L Q J 3 H U V R Q ¶ V st X L G H W R : U L Century. New York: Penguin

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

Course Description
The primary purpose of this course is to prepare you to do an undergraduate thesis project 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

I assume you already have a good grasp of univariate methods (t-tests, correlations) and issues so that we may delve into issues that arise when you need to analyze two or more dependent and/or independent variables. After covering the basics of data cleaning and reduction, we will cover each of the three major multivariate methods: factor analysis, MANOVA, and regression. These three are mathematically related to each other and most other techniques can be understood as variations of these three. Weekly labs will focus on SPSS procedures as well as clarify issues from lecture and the homeworks.

Although statistics are based on mathematical formulas that represent the relationships among variables, the intent of this course is to focus on statistics as a means of principled argument (Abelson, 1995). We use statistics to make inferences about the true nature of the world, to answer research questions, to test theories. Hence, the goals of the course are to make sure that you walk away understanding the conceptual underpinnings of each technique, the SPSS procedures necessary to conduct these analyses, and the skills to be able to critically interpret your own results and the claims of the research you encounter throughout your careers. Thus, this not a course of memorization but training in how to be an effective researcher.

A few other things for your consideration:

1. The range of expertise in the class is broad. I will aim for the middle level. Thus, advanced students may be interested in more detail and novice students may struggle a bit. That is the nature of such a course as this. However, I have always felt like I could take one introductory stats course each year and still get something out of it. Which leads P H W R «
2. Redundancy. The absolutely best way to learn statistics is through redundancy, a repetition of the same ideas, multiple presentations of the same material, experiencing a technique in different contexts, the reiteration of crucial details, and practice, practice, practice. To this end, I will emphasize what is shared among the techniques as well as try

to each of those 4 criteria for a total of 20 points. Each student will then randomly be assigned RQH SHHU¶V SURSRVDO IRU UHYLHZ 3HHUV ZLOO SURYLGH points above. You will not receive points for submitting the peer feedback BUT you will be penalized 20 points for not submitting it by the deadline. Proposal 2 will be the same process except that the statistics must be multivariate. You can choose the same research question as Proposal 1 or a different one. Again, 5 points for adhering to each of the 4 criteria for a total of 20 points, and minus 20 points for not submitting the peer critique on time. Your final proposal will be a five page, double-spaced proposal, which will be graded similar but more detailed criteria (rubric will be posted on onQ) but the TAs will apply letter grades. We will spend at least three lectures covering the art of proposal writing and there will be research proposals of various sizes, lengths, and purposes for you to peruse. The only way to learn how to write a particular form is to read that form. I am guessing that almost none of you have ever read a research proposal.

***All written assignments will be submitted to TURNITIN. Plagiarism will not be tolerated.***

Grading

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| In lecture 1-minute papers (8 x 5 points each) = | 40 | 10% |
| Homeworks (4 x 30 points each) = | 120 | 30% |
| Lab Quizzes (8 x 10 points each) = | 80 | 20% |
| Proposal 1 = | 20* | 5% |
| Proposal 2 = | 20* | 5% |
| Final Proposal = | 120 | 30% |
| Total = | 400 points | 100% |

*Note: -20 points if you do not submit peer feedback on Proposals 1 or 2 by deadline.

Electronic Considerations

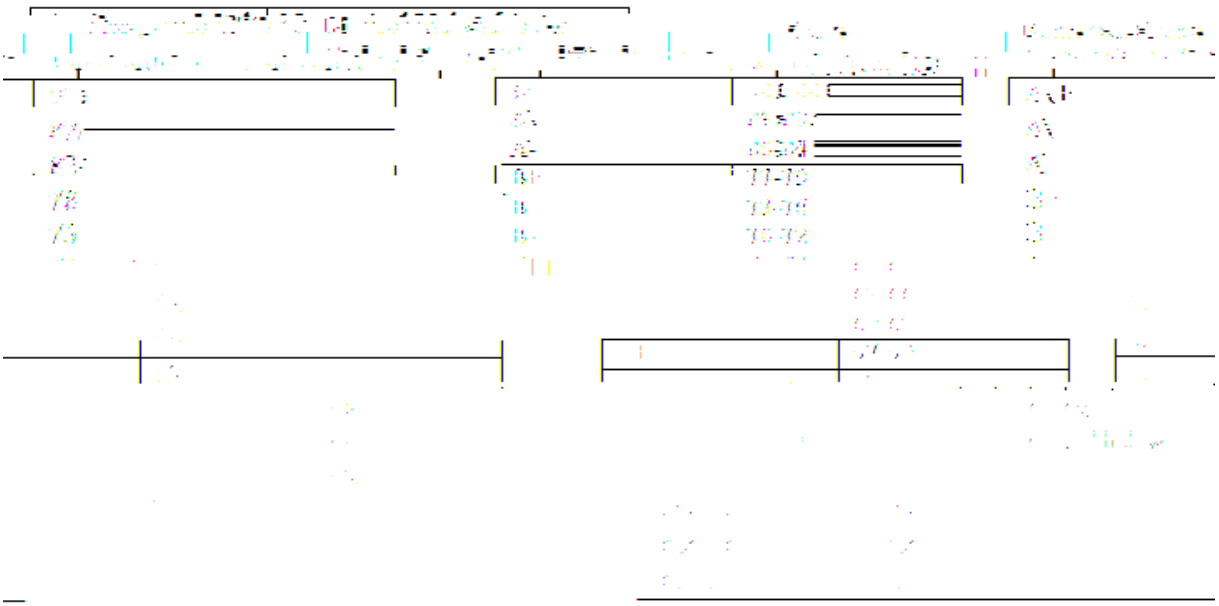
The course materials will be distributed through onQ. Please log in before the second class to make sure that you have no problems with access.

We will be using SPSS for all analyses in this course. Course QWO\ 4XHHQ¶V VSSRU version 24. Versions 20 through 24 will perform all the analyses required. The lab in 219 has copies on each computer for you to use. However, getting the student version for yourself is required for the course.

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.

GRADING METHOD All components of this course will receive numerical percentage marks. The final grade you receive for the course will be derived by converting your numerical course average to D OHWWHU JUDGH DFFRUGLQJ WR 4XHHQ¶V 2IILFLDO *UDGH &R



Academic Integrity.

4XHHQ¶V VWXGHQWV IDFXOW\ DGPLQLVWUDWRUV and DQG VWDI upholding the fundamental values of academic integrity. Academic integrity is constituted by the core fundamental values of honesty, trust, fairness, respect and responsibility (see www.academicintegrity.org) and by the quality of courage. These values and qualities are central to 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.

Students are responsible for familiarizing themselves with and adhering to the regulations concerning academic integrity. General information on academic integrity is available at Integrity@Queen's University, along with Faculty or School specific information. Departures from academic integrity include, but are not limited to, plagiarism, use of unauthorized materials, facilitation, forgery and falsification. Actions which contravene the regulation on academic integrity carry sanctions that can range from a warning, to loss of grades on an assignment, to failure of a course, to requirement to withdraw from the university.

Turnitin

4XHHQ¶V 8QLYHUVLW\ has entered into a partnership with Turnitin.com, an 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 processing 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. See also privacy statement at:

Accommodations

Queen's University is committed to achieving full accessibility for persons with disabilities. Part of this commitment includes arranging academic accommodations for students with disabilities to ensure they have an equitable opportunity to participate in all of their academic activities. If you are a student with a disability and think you may need accommodations, you are strongly encouraged to contact Student Wellness Services (SWS) and