

PSYC*6380, Course Outline: Fall 2016

General Information

Course Title: Multivariate Statistics in Psychology

Course Description:

By the end of this course, the successful student will be an informed, thoughtful, and skilled user of multivariate statistical techniques. 'Recipe book' and 'one size fits all' approaches will be eschewed in favour of extensive data exploration (largely graphical) and interpretation, and—where justified—estimation of parameter values.

Credit Weight: 0.50

Academic Department (or campus): Psychology

Semester Offering: F16

Class Schedule and Location: Wednesday 8:30 AM to 11:20 AM; MINS 128

Instructor Information

Instructor Name: Ian Newby-Clark

Instructor Email: inewby@uoguelph.ca

Instructor Phone: 519-824-4120 x53517

Office location and office hours: MacKinnon Extension 3006; By Appointment

Course Content

Specific Learning Outcomes:

By the end of this course, a successful student will be able to:

1. **demonstrate the ability** to generate high quality reports and appealing presentation slides **using R Markdown and Knitr**
2. **justify**, in writing, his/her approach to a multivariate data analytic problem given the nature of the data and the nature of the problem.
3. **justify**, in oral form, his/her approach to a multivariate data analytic problem given the nature of the data and the nature of the problem.
4. **conduct** justified analyses of data using the statistical program R.

5. **effectively communicate** the results of multivariate statistical analyses through **clear and persuasive writing (including graphs)**.
6. **effectively communicate** the results of multivariate statistical analyses through **clear and persuasive oral presentations**.
7. **facilitate classmates' and his/her own learning** by effectively **collaborating** on group assignments and by **fully participating** in class activities and discussions.

Seminars:

This course will follow a 'problem based learning' format. When deemed necessary, the instructor will give brief lectures/explanations/demonstrations on key concepts and techniques.

Course Assignments and Tests:

Assignment or Test	Due Date	Contribution to Final Mark (%)	Learning Outcomes Assessed
R Markdown and Knitr Assignment (Individual)	Sept. 20 th	5	1
One-On-One Meeting with Instructor	Week of Sept. 26 th	2	7
	Week of Oct. 24 th	2	7
	Week of Nov. 21 st	2	7
Group Oral Report of Statistical Investigation #1	Oct. 5 th	15	1,3,4,6,7
Group Written Report of Statistical Investigation #2	Oct. 26 th	20	1,2,4,5,7
Individual Oral Report of Statistical Investigation #3	Nov. 2 nd & 9 th	20	1,3,4,6,7
Individual Written Report of Statistical Investigation #4	Nov 30 th	20	1,2,4,5,7
Facilitation of Classmates' Learning	Oct. 19 th	7	7
	Nov. 30 th	7	7

Additional Notes (if required):

Final examination date and time: Not Applicable

Final exam weighting: Not Applicable

Course Resources

Required Texts:

You are not required to purchase any texts for this course. It is imperative that you are deeply familiar with the [Thesis Statistics Guidelines](#) document and that you complete deep readings of all assigned chapters, articles, and other such documents (to be assigned on an as needed basis).

Recommended Texts:

Feel free to bring any and all statistical texts to class and to share links to online resources.

Other Resources:

The course website, located on Courselink, contains a number of useful links and supplementary resources. Also, written assignments and slides from oral presentations will be submitted via Dropbox on Courselink. It is highly recommended that students visit the course website frequently for information and updates.

Course Policies

Grading Policies

Late assignments will be given a grade of zero. No allowance will be made for computer problems. It is therefore highly recommended that students back up their work and that assignments be submitted well before posted deadlines.

Graduate Grade interpretation

Assignment-specific grading standards will be made available to students when an assignment is posted.

Course Policy on Group Work:

It is expected that all members of a group will fully participate in all group activities. Details about 'who is responsible for what' and how marks are assigned will vary from assignment to assignment.

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.

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:

[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 [Graduate Calendar](#)

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 the [Student Accessibility Services](#) as soon as possible.

For more information, contact SAS at 519-824-4120 ext. 54335 or email csdexams@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 Friday November 4th, 2016. For regulations and procedures for Dropping Courses, see the [Schedule of Dates in the Academic Calendar](#).
[Current Graduate Calendar](#)

Additional Course Information

Course instructors are allowed to use software to help in detecting plagiarism or unauthorized copying of student assignments. Plagiarism is one of the most common types of academic misconduct on our campus. Plagiarism involves students using the work, ideas and/or the exact wording of other people or sources without giving proper credit to others for the work, ideas and/or words in their papers. Students can unintentionally commit misconduct because they do not know how to reference outside sources properly or because they don't check their work carefully enough before handing it in. As the 2014/15 Undergraduate Calendar states: "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" (p. 31).

In this course, your instructor will be using Turnitin.com to detect possible plagiarism, unauthorized collaboration or copying as part of the ongoing efforts to prevent plagiarism in the College of Social and Applied Human Sciences.

A major benefit of using Turnitin is that students will be able to educate and empower themselves in preventing misconduct. In this course, you may screen your own assignments through Turnitin as many times as you wish before the due date. You will be able to see and print reports that show you exactly where you have properly and improperly referenced the outside sources and materials in your assignment.