

Psychology 617	Advanced Research Design and Analysis II	Winter 2017
Instructor:	Tom O’Neill	Lecture Location: Taylor Institute, Learning Studio B
Phone:	403-220-5207	Lecture Days/Time: R 2:00-4:45
Email:	toneill@ucalgary.ca	TAs: Amanda Julian and Nicole Larson
		TA Office: EDT 1248
Office:	Admin 264	Lab Location: SS018
Office Hours:	By appointment	Lab Day/Time: M 9:00-11:45
		Office Hours: By appointment

Course Description and Goals

Multivariate techniques and design issues, including correlations, multiple regression, canonical correlation, logistic regression, discriminant analysis, MANOVA, linear mixed models with nested and longitudinal designs (e.g., “hierarchical linear modeling”), exploratory factor analysis, confirmatory factor analysis, path analysis, and structural equation modeling. By the end of this course you should have working knowledge of the theory and application of each statistical technique.

Required Text

Meyers, L. S., Gamst, G., & Guarino, A. J. (2013). Applied multivariate research: Design and interpretation (2nd OR 3rd ed.). Sage.

Evaluation

1. Midterm exam (Feb 16th): 25% (on material covered to February 15th)
2. Final exam (Apr 6th): 40% (cumulative)
3. Lab assignments: 30% (6 total)
4. Class participation / submission of in-class exercises: 5%

Grading Scale

A+	96-100%	B+	80-84%	C+	67-71%	D+	54-58%
A	90-95%	B	76-79%	C	63-66%	D	50-53%
A-	85-89%	B-	72-75%	C-	59-62%	F	0-49%

To determine final letter grades, final percentage grades will be rounded up or down to the nearest whole percentage (e.g., 89.5% will be rounded up to 90% = A but 89.4% will be rounded down to 89% = A-).

**Important dates
Winter 2017**

Date	
M Jan 09	Winter term lectures begin.
F Jan 20	Last day to drop Winter Term half-courses. No refunds for Winter Term half courses after this date.
M Jan 23	Last day to add or swap Winter Term half courses. Last day for change of registration from audit to credit or credit to audit.
Feb 19 - 26	Reading Week. No lectures.
M Feb 20	Alberta Family Day. No Classes. University Closed
F Apr 14	Good Friday. No Classes. University Closed
W Apr 12	Winter Term Lectures End. Last day to withdraw with permission from Winter or Multi Term courses.

Date	Topic/Activity/Readings/Due Date
R Jan 12	Course overview, correlation, and other general issues in statistics
M Jan 16	Lab: Introduction to SPSS; Correlation
R Jan 19	Multiple Regression
M Jan 23	Lab: Correlation and Multiple Regression*
R Jan 26	Logistic Regression
M Jan 30	Lab: Logistic Regression* <i>Due: Assignment 1</i>
R Feb 2	Discriminant Function Analysis and MANOVA
M Feb 6	Lab: Discriminant Function Analysis and MANOVA* <i>Due: Assignment 2</i>
R Feb 9	Canonical Correlation and Exam Review
M Feb 13	Lab: Exam review <i>Due: Assignment 3</i>
R Feb 16	Midterm exam
M Feb 20	Family day – no class
R Feb 23	Reading days – no class
M Feb 27	Lab: Exam feedback
R Mar 2	Multilevel Modeling: Nested Designs
M Mar 6	Lab: Multilevel Modeling: Nested Designs*
R Mar 9	Multilevel Modeling: Longitudinal Designs
M Mar 13	Lab: Multilevel Modeling: Longitudinal Designs* <i>Due: Assignment 4</i>
R Mar 16	Exploratory Factor Analysis
M Mar 20	Lab: EFA <i>Due: Assignment 5</i>
R Mar 23	Confirmatory Factor Analysis: Essentials of Measurement Models
M Mar 27	Lab: CFA*

R Mar 30	Path Analysis & Structural Equation Modeling & Exam Review
M Apr 3	Lab: Path Analysis, SEM, and Exam Review <i>Due: Assignment 6</i>
R Apr 6	Final Exam

* = Indicates labs with assignment component

Reappraisal of Grades

A student who feels that a piece of graded term work (e.g., term paper, essay, test) has been unfairly graded, may have the work re-graded as follows. The student shall discuss the work with the instructor within 15 days of being notified about the mark or of the item's return to the class; no reappraisal of term work is permitted after the 15 days. If not satisfied, the student shall immediately take the matter to the Head of the department offering the course, who will arrange for a reassessment of the work within the next 15 days. The reappraisal of term work may cause the grade to be raised, lowered, or to remain the same. If the student is not satisfied with the decision and wishes to appeal, the student shall address a letter of appeal to the Dean of the faculty offering the course within 15 days of the unfavourable decision. In the letter, the student must clearly and fully state the decision being appealed, the grounds for appeal, and the remedies being sought, along with any special circumstances that warrant an appeal of the reappraisal. The student should include as much written documentation as possible.

Plagiarism and Other Academic Misconduct

Intellectual honesty is the cornerstone of the development and acquisition of knowledge and requires that the contribution of others be acknowledged. Consequently, plagiarism or cheating on any assignment is regarded as an extremely serious academic offense. Plagiarism involves submitting or presenting work in a course as if it were the student's own work done expressly for that particular course when, in fact, it is not. Students should examine sections of the University Calendar that present a Statement of Intellectual honesty and definitions and penalties associated with Plagiarism/Cheating/Other Academic Misconduct.

Academic Accommodation

It is the student's responsibility to request academic accommodations. If you are a student with a documented disability who may require academic accommodation and have not registered with the Disability Resource Centre, please contact their office at 403-220-8237. Students who have not registered with the Disability Resource Centre are not eligible for formal academic accommodation. You are also required to discuss your needs with your instructor no later than 14 days after the start of this course.

Absence From A Test/Exam

Makeup tests/exams are **NOT** an option without an official University medical excuse (see the University Calendar). A completed Physician/Counselor Statement will be required to confirm absence from a test/exam for health reasons; the student will be required to pay any cost associated with this Statement. Students who miss a test/exam have up to 48 hours to contact the instructor and to schedule a makeup test/exam. Students who do not schedule a makeup test/exam with the instructor within this 48-hour period forfeit the right to a makeup test/exam. At the instructor's discretion, a makeup test/exam may differ significantly (in form and/or content) from a regularly scheduled test/exam. Except in extenuating circumstances (documented by an official University medical excuse), a

makeup test/exam must be written within 2 weeks of the missed test/exam during exam make-up hours provided by the department <https://psyc.ucalgary.ca/undergraduate/exam-review-and-makeup-exams>.

Travel During Exams

Consistent with University regulations, students are expected to be available to write scheduled exams at any time during the official December and April examination periods. Requests to write a make-up exam because of conflicting travel plans (e.g., flight bookings) will NOT be considered by the department. Students are advised to wait until the final examination schedule is posted before making any travel arrangements. If a student cannot write their final exam on the date assigned by the Registrar's Office, they need to apply for a deferred exam. Under no circumstances will this be accommodated by the department.

Freedom of Information and Protection of Privacy (FOIP) Act

The FOIP legislation disallows the practice of having student's retrieve tests and assignments from a public place. Therefore, tests and assignments may be returned to students during class/lab, or during office hours, or will be made available only for viewing during exam review sessions scheduled by the Department. Tests and assignments will be shredded after one year. Instructors should take care to not link students' names with their grades, UCIDs, or other FOIP-sensitive information.

Evacuation Assembly Point

In case of an emergency evacuation during class, students must gather at the designated assembly point nearest to the classroom. The list of assembly points is found at

<http://www.ucalgary.ca/emergencyplan/assemblypoints>

Please check this website and note the nearest assembly point for this course.

Student Organizations

Psychology students may wish to join the Psychology Undergraduate Students' Association (PSYCHS). They are located in Administration 130 and may be contacted at 403-220-5567.

Student Union VP Academic: Phone: 403-220-3911 suvpaca@ucalgary.ca

Student Union Faculty Rep.: arts1@su.ucalgary.ca

Student Ombudsman's Office

The Office of the Student Ombudsmen provides independent, impartial and confidential support for students who require assistance and advice in addressing issues and concerns related to their academic careers. The office can be reached at 403-220-6420 or ombuds@ucalgary.ca

(<http://www.ucalgary.ca/provost/students/ombuds>)

Safewalk

The safewalk program provides volunteers to walk students safely to their destination anywhere on campus. This service is free and available 24 hrs/day, 365 days a year.

Call 403-220-5333.

Important Dates

The last day to drop this course with no "W" notation and **still receive a tuition fee refund is January 20, 2017**. Last day for registration/change of registration is **January 23, 2017**. The last day to withdraw from this course is **April 12, 2017**.