

Term 1 Prof James T. Enns	Office CIRS 4355 Phone 604-822-6634	Email: jenns@psych.ubc.ca
Term 2 Prof Marcus Watson	Office xxx Phone xxx	Email: marcusrwatson@gmail.com
Lectures	TTh 8:00-9:20 am	Buch B215
Lab	Wed 2:00-3:50 pm	Buch D217 (Term 2 Buch D317)
Project Coordinator Tahereh Bozorgmehr	BRC	Email: t.bozorg@psych.ubc.ca
Teaching Assistant Ana Pesquita	Kenny 3606	Email: anapesquita@psych.ubc.ca

Course Description

In this course you will become an informed consumer, user, and designer of behavioral research methods. This means learning how to organize data, perform various statistical procedures, plan experiments, and communicate your research in words and in print. There are three distinct parts to the course. One deals with the nuts and bolts of statistical analysis and research design; this will be covered in Tue-Th lectures and the Pagano textbook. A second part deals with the hands-on analysis of various data sets; here the open source R software is a primary resource. But this course is worth 8 credits (not the usual 6). That means there is also a laboratory project in this course that runs parallel to the lecture component. Think of this as your “thesis project,” the one that will indicate to your future employers and academic supervisors that you are able to conduct all the steps in a research project, from understanding its purpose to communicating its findings. 30% of your entire grade in this course is based on your work on this project. The special Project Coordinator is entirely responsible for setting and grading your assignments in this portion of the course. More details concerning this part of the course will be given to you in the Lab scheduled for this course.

Approach to Learning

Lectures cover basic statistical concepts and methods. There is much overlap with the textbook, but lecture material is presented from a somewhat different perspective, in order to give optimal opportunity for different learning styles. Lectures and assignments emphasize “active learning.” You will consistently be encouraged to ask “what if?” and “let’s see how things look differently if we do them this way.” The R and project portions of the course are even more “hands on.” It is ultimately your responsibility to make sure that your work in the project is on a topic of interest to you that you are getting the supervision you need to complete the project. As we say at UBC, *tuum est!*

Three Requirements

Calculator It is your responsibility to bring one to each class and exam. It should have basic memory functions and square/square root functions. You will not be permitted to use devices with outside connectivity (i.e., phones).

Old-fashioned Notebook Absolutely essential! In this class we will use paper, you will work on problems by hand on paper, you will create your own notes to be used in exams on paper, you will hand in responses on sheets of paper you tear out of your notebook. You will need paper!

Textbook Understanding Statistics (10th edition or earlier), by R. Pagano

Weekly Homework

Ten (10) weekly homework assignments found at the end of each chapter (any 10 chapters for 1 point each. Answers to many questions can be found at back of text). These are NOT graded. We simply collect them and note them as 1 (complete) or 0 (missing). All homework is due each Tuesday, exactly one week from when it is listed in the course schedule (e.g, Chap 1 due the Tuesday following its listing on the schedule). No exceptions and no grade for late assignments.

R Assignments

Four (4) assignments will demonstrate your ability to use R to accomplish basic statistical and graphing functions. During the lab, the TA will give a brief lecture showing how to perform a number of introductory functions with R. Short lab assignments will be given that you will have time to work on in the lab and ask questions, as well as during class time. Assignments are due the following week at the **beginning** of the lab.

Grading

Exams will cover material from the lectures, labs and textbook. Expect the end of year grades to have a mean of 75% and a standard deviation of 11%.

Midterm exams	40%
Weekly homework	10%
R labs (homework & exam)	10%
In class participation (lecture & lab)	10%
Presentations (3-min & final)	5%
Research Project	25%

Missed Exam and Assignment Policy

Only medical reasons will be accepted for missing an exam or assignment. For any absence you must notify me (jenns@psych.ubc.ca) or the Psychology Department office (822-2755) in advance of the deadline. If you show up AFTER a deadline saying you were sick, you will receive no credit.

Psychology Department's Position on Academic Misconduct

Cheating, plagiarism, and other forms of academic misconduct are very serious concerns of the University, and the Department of Psychology has taken steps to alleviate them. Strong evidence of cheating or plagiarism may result in a zero credit for the work in question. According to the University Act (section 61), the President of UBC has the right to impose harsher penalties including (but not limited to) a failing grade for the course, suspension from the University, cancellation of scholarships, or a notation added to a student's transcript. All graded work in this course, unless otherwise specified, is to be original work done independently by individuals. If you have any questions as to whether or not what you are doing is even a borderline case of academic misconduct, please consult your instructor. For details on University policies and procedures, please see Student Conduct and Discipline in the UBC Calendar www.calendar.ubc.ca/vancouver/index.cfm?tree=3,54,0,0

Week Chapter and Lecture Topic

Sep 04 Chap 1 Introduction to behavioral research and statistics

Sep 09 Chap 2 Basic measurement concepts

Sep 16 Chap 3 Frequency distributions

Sep 23 Chap 4 Central tendency and variability

Thursday Oct 02 MIDTERM EXAM 01 IN CLASS

Oct 07 Chap 5 Normal curve and standard scores

Oct 14 Chap 6 Correlation

Oct 21 Chap 7 Linear Regression

Thursday Oct 30 MIDTERM EXAM 02 IN CLASS

Note times are WED 2-3:50 pm. ** Bring your laptop to all R labs **

Note Tue-Thurs 8-9:30 am for unsupervised R group activities

Nov 05 R Lab 01: Introduction to R

Nov 12 R Lab 02: Working With Data

Nov 19 R Lab 03: Correlation/Regression

Wednesday Nov 26 R LAB EXAM

Note back to Tue-Thurs 8:00 am lecture schedule

Jan 06 Chap 10/11 Hypothesis Testing & the Sign Test /Statistical Power

Jan 13 Chap 12 Sampling Distributions & the z-test

Jan 20 Chap 13/14 t-Tests

Thursday Jan 29 MIDTERM EXAM 03 IN CLASS

Feb 03 Chap 15 Analysis of variance

Feb 10 Chap 15 Multiple Comparisons

Feb 16-20 No Classes — Study Break

Feb 24 Chap 16 Two-way ANOVA

Thursday Mar 05 MIDTERM EXAM 04 IN CLASS

Mar 10-12 PROJECT PRESENTATIONS in class

Mar 17-19 PROJECT PRESENTATIONS in class

Mar 24-26 PROJECT PRESENTATIONS in class

Mar 31-Apr 02 PROJECT PRESENTATIONS in class

Apr 07 **Final Project Paper due by 4:00 pm to Project Coordinator**

**** All grade appeals must be made in writing to Dr. J. Enns, 4355 CIRS ****