

Term 1 Prof **James T. Enns**

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Phone 604-822-6634

Lectures TTh 8:00-9:20 am

Buch B215

Lab Wed 2:00-3:50 pm

Buch D217 (Term 2 Buch D317)

Project Coordinator **Michael Barrus**

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Teaching Assistant T1 **Aram Bernardos**

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Teaching Assistant T2 **Stefan Bourrier**

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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 some statistical procedures, plan experiments, and communicate your research in words and 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 Tuesday-Thursday lectures and the Pagano textbook. A second part deals with the hands-on analysis of various data sets; here the open source JASP 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 "junior 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. This includes understanding the purpose to communicating the findings. 30% of your entire grade in this course is based on your work on this project. The 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 Wednesday 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 JASP 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 and 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) sets of weekly homework assignments found at the end of each chapter (do the entire set of questions in any chapter for 1 point). Answers to many questions can be found at back of text. Homework is NOT graded by us. 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.

JASP Assignments

These assignments will demonstrate your ability to use JASP to accomplish basic statistical and graphing functions. During these sessions, you will receive a brief lecture on how to perform a number of introductory functions with JASP. 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%
JASP 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 07 Orientation to the Course

Sep 12 Chap 1 Introduction to behavioral research and statistics

Sep 19 Chap 2 Basic measurement concepts

Sep 26 Chap 3 Frequency distributions

Oct 03 Chap 4 Central tendency and variability

Tuesday Oct 10 MIDTERM EXAM 01 IN CLASS

Oct 17 Chap 5 Normal curve and standard scores

Oct 24 Chap 6 Correlation

Oct 31 Chap 7 Linear Regression

Tuesday Nov 07 MIDTERM EXAM 02 IN CLASS

Nov 14 JASP Lab 01: Introduction to JASP

**** Bring your laptop to all JASP labs in Nov****

Nov 21 JASP Lab 02: Univariate Statistics

Nov 28 JASP Lab 03: Correlation/Regression

Thursday Nov 30 JASP EXAM IN CLASS

Jan 09 Chap 10/11 Hypothesis Testing & the Sign Test /Statistical Power

Jan 16 Chap 12 Sampling Distributions & the z-test

Jan 23 Chap 13/14 t-Tests

Tuesday Jan 30 MIDTERM EXAM 03 IN CLASS

Feb 06 Chap 15 Analysis of variance

Feb 13 Chap 15 Multiple Comparisons

Feb 19-23 Study Break -- no classes

Feb 27 Chap 16 Two-way ANOVA

Tuesday Mar 06 MIDTERM EXAM 04 IN CLASS

Mar 13-15 PROJECT PRESENTATIONS in class and lab

Mar 20-22 PROJECT PRESENTATIONS in class

Mar 27-29 PROJECT PRESENTATIONS in class

Apr 05 Final Project Paper due by 4:00 pm to Project Coordinator

**** All grade appeals must be made in writing to the Instructor ****