Prof **James T. Enns** Office CIRS 4355 Email: jenns@psych.ubc.ca
Phone 604-822-6634

Lectures	TTh 11:00-12:20 am	Swing 122
Lab	Friday 2:00-5:00 pm	Pharm 1201
Lab Coordinators	**Sumeet Mutti**	Email: sumeet@psych.ubc.ca
	Alex Yu	Email: alexyu@psych.ubc.ca

Course Description
In this course you will become an informed consumer and user of behavioral statistical methods. This includes learning how to organize data, performing statistical procedures, planning experiments, and communicating your research in words and print. There are two 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 and the presentation of scientific information; this laboratory component runs in parallel to the lectures on Fridays. And to reflect this intensity, this course is worth 4 credits (not the usual 3). The Lab Coordinators are 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 introductory 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 be encouraged to ask "what if?" and "let's see how things look differently if we do them this way."

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).

Laptop/Tablet We will use some open source software in class to illustrate ideas.
https://www.jamovi.org/download.html
Please download a version that works on your device and have it available in class. We will **not** access this software on tests.

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. 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.

Grading

Lecture Components	
Midterm exams (2 x 10%)	20%
Weekly homework (10 possible)	10%
Final Exam	30%
Lab Components	
Written Assignments	20%
Peer Review (10% from student average, 2.5% x 4 paper sections)	
Group (Instructor graded 10%, 2.5% x 4 paper sections)	
Poster Presentation	10%
Peer Review (5%, student average on Presentation and Paper)	
Group (Instructor graded 5%)	
Research Paper (Instructor graded)	10%

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

LECTURE SCHEDULE (Tue & Thurs 11-12:30)

Week	Chapter	Topic	Date
1	review	Introduction	Jan 3
2	Pagano 4	Central Tendency Variability	Jan 8
3	Pagano 5	Standard Scores Normal Distribution	Jan 15
4	Pagano 6	Correlation Part 1 Correlation Part 2	Jan 22
5	Pagano 7	Regression Part 1 Regression Part 2	Jan 29
6	Midterm Exam 1		Feb 5
	Pagano 10	Hypothesis Testing	
7	Pagano 11	Statistical Power	Feb 12
		---------- READING BREAK ----------	
8	Pagano 12	Sampling Distributions z-test	Feb 26
9	Pagano 13	t-test Part 1	Mar 5
	Pagano 14	t-test Part 2	
10	Midterm Exam 2		Mar 12
	Pagano 15	Analysis of variance	
11		Multiple Comparisons 1 Multiple Comparisons 2	Mar 19
12	Pagano 16	Factorial ANOVA Repeated Measures	Mar 26
13	Wrap up and review		Apr 2
Final Exam			tba in the UBC Schedule

LAB SCHEDULE (Friday 2-5 pm)

Week	Topic		Date
1	Introduction, Form Groups How to write Methods		Jan 4
2	APA format, plagiarism Settle on Group Data Set		Jan 11
3	**Methods Section**: Individual due with Peer Eval in class		Jan 18
4	**Method Section**: Group due How to write Results		Jan 25
5	**Results Section**: In class Statistics Workshop		Feb 1
6	No Lab since Midterm Exam 1 this week on Feb 5		Feb 8
7	**Results Section**: Group due How to write Introduction and Discussion		Feb 15
	---------- READING BREAK ----------		
8	**Introduction**: Individual due with Peer Eval in class		Mar 1
9	**Introduction**: Group Intro due What makes an effective presentation?		Mar 8
10	**Discussion**: Individual Discussion due with Peer Eval		Mar 15
11	**Discussion**: Group Discussion due Group Presentations 1		Mar 22
12	Group Presentations 2		Mar 29
	Final Group Papers Due	**5:00 pm Thursday**	**Apr 4**

* Expect the end of year grades to have a mean of 75% and a standard deviation of 11%.
** All grade appeals must be made in writing to the Instructor