## Psychology 302 Statistical Methods in Psychology Winter 2004 CRN 25169

<u>Lecture</u>: Mon – Wed -- Fri 9:00-9:50 a.m. 146 Straub <u>Labs</u>: 180 Straub Hall Mon. 12:00-1:20 p.m., Thurs. 2:00-3:20 p.m., or Thurs. 4:00-5:20 p.m.

#### Instructor:

Jennifer Simonds Office: Gilbert 199L / Phone: (Temporary Office for Winter Term) jsimonds@darkwing.uoregon.edu Office Hours: Held in Lillis Café/Atrium Mondays 10:30 – 11:30 a.m. Thursdays 1:30-2:30 p.m.

## Lab Coordinators:

Veronica Perez (Labs – Thursdays 2:00-3:20 p.m.; 4:00-5:20 p.m.) Straub 320 / 346-4990 Office Hours: TBA vperez@darkwing.uoregon.edu

Sharon Tang (Lab – Mondays 12:00-1:20 p.m.) Straub 202 / 346-4881 Office Hour (half-time TA): TBA stang@darkwing.uoregon.edu

**Course Description:** This course will cover the use of basic statistical methods in psychology. You will learn how to analyze data and how to answer basic research questions. Many of the concepts and procedures in this course involve mathematical calculations, particularly arithmetic and algebra. You do not need to be a math genius to do well; however, familiarity with algebra is required for the course.

Course Prerequisite: Mathematics 111 (or equivalent)

## Materials:

<u>Textbook</u> (required): Gravetter, F. J. & Wallnau, L. B. (2002) *Essentials of statistics for the behavioral sciences* (4<sup>th</sup> ed.). Pacific Grove, CA: Wadsworth.

Students are responsible for reading the assigned chapters prior to class meeting (except for 1<sup>st</sup> lecture). You are not expected to master the material but to expose yourself to the major concepts we will be covering. This preparation will make lectures more meaningful and productive.

<u>Calculator</u> (strongly recommended): It is recommended that you bring a calculator to every class session. This will help you with any in-class problems requiring calculations, and the habit of bringing the calculator to class will increase the likelihood that you remember to bring it on exam days.

<u>Blackboard Access with Regular e-mail</u> (strongly recommended to have University email): We will be using the Blackboard website (http://blackboard.uoregon.edu) for this course. You are all registered with the site and logging on is much easier to do with a university account compared to an outside account. You can verify or change the address that the University associates with Blackboard by going to DuckWeb and changing personal information (for example: your Gladstone account is listed with the University but you rarely check it and use a hotmail account instead. It would be recommended that you change your email to hotmail on DuckWeb).

**Lectures and Laboratories** Attached is a list of lecture topics and reading assignments from the text. Lectures and lecture handouts will be posted on Blackboard by no later than 10:00 p.m. the day before lecture. In addition to the lectures, there are weekly laboratory sessions designed to 1) provide review and demonstrations of topics covered in class, 2) show you how to do statistical computations using the popular statistical program SPSS, 3) discuss the problem sets, and 4) review for exams. Please plan to attend your lab session.

**Quizzes** There will be four (4) bi-weekly quizzes every other Friday (except dead week) and a final exam, each consisting of multiple choice, short answer, and calculation problems. The final exam will be open book. Calculators are allowed and encouraged; however, *to receive full credit for calculation problems on exams, you will need to show each step of your work*. Make-up quizes may be given only under extreme circumstances where *the instructor* has been notified of your absence <u>ahead of time</u> (e.g., serious illness, injury, family death). Proof of the extenuating circumstance needs to be provided (e.g., doctors note). There will be no make-ups offered for the final exam (March 16, 10:15a-12:15p). (You are, however, allowed to take any exam earlier than its scheduled time, depending on instructor and/or TA availability.)

## Homework (HW)/Blackboard Learning Checks (LC)

<u>Homework</u>: Most weeks, you will be assigned problem sets as homework. Problem sets will usually be posted on Blackboard one week ahead of the due date.

<u>Answer sheets</u> will be posted on Blackboard. You will do your work on your own paper and then transfer your answers to the answer sheet. Staple the completed answer sheet to your own pages showing your work on each problem. Answer sheets *and* showing your work on each problem on separate sheets of paper are <u>required</u> in order for you to receive credit for the homework assignment.

Because it is important to a) have attended lectures on the homework topics before doing the homework, and, in most cases, b) get homeworks back to study for quizzes, the homework is due on different days of the weeks, depending on the week. *It is your responsibility to keep track of the homework due dates.* Reminders about homework due dates will be included in announcements at the very beginning of class. If you are late to class, you will need to check with other students to get homework reminders.

It is a good idea to bring questions on the problem sets to lab sessions. Your work must be shown in order to get full credit for homework problems. Late homework will receive a 10% reduction in your score per day that it is late (i.e., 1 day- 10%, 2 days- 20%, and so forth). Late homework must either be turned in at lecture, in lab, or to the PsychOffice (Straub131) with your lab coordinator's name CLEARLY written on your homework. Lab Coordinators will discuss the particulars of how to hand in homework to get full credit in lab.

<u>Learning Checks</u>: There will be 1-2 Learning Checks posted on Blackboard each week based on the lectures and the readings for that week. Assigned learning checks should be completed before each quiz. You may use learning checks as reviews for the exams. Learning Checks must be complete by exam day in order to receive credit for them.

You may take each Learning Check more than once. So try it closed book first, and then try it again with notes if you had problems. Learning Checks are assessed on a pass/no pass basis. If you complete the check, you get a "pass"; if you don't complete it, you receive a "no pass." Your score on the Learning Check is *not* recorded; it is for your own reference.

## Grading

Participation30 pointsHomework130 pointsQuizzes80 pointsFinal Exam100 points340 points

(in-class/Blackboard – 20; learning checks – 10) (10 for Homeworks 1 & 3, 20 for Homework 2, 15 for Homeworks 4-9) (20 each quiz) Letter grades will be assigned using the following scale (based on percentage of total points earned):

%	Grade		
98-100	A+		
93-97	А		
90-92	A-		
87-89	B+		
83-86	В		
80-82	B-		
77-79	C+		
73-76	С		
70-72	C-		
67-69	D+		
63-66	D		
60-62	D-		
>/= 70	Pass		
< 70	No Pass		

## Additional Notes:

- <u>Concerns</u>: If you find yourself doing more poorly in the class than anticipated, please see the Instructor or your Lab Coordinator sooner rather than later. If you wait to come forward with any problems, you may find that it is too late to do anything about your grade.
- <u>Cheating</u>: Cheating will not be tolerated. If cheating is discovered on the Final Exam or the biweekly quizzes, then the University will be notified and appropriate action will be taken. You may work together on the problem sets, but each student needs to turn in an individually completed problem set with work shown for credit.
- <u>Accommodations</u>: If one of the following applies to you, please see the instructor as soon as possible to make adjustments.
  - Documented learning disability
  - Non-documented need for adjustments to help you learn
  - On a sports team that travels this quarter
  - English is not your first language

With advance planning, adjustments are relatively easy. Adjustments at the last minute are problematic and sometimes not possible:

Day	Date	Topic(s)	Reading	HW?
Mon	Jan. 5	Orientation/Definitions	Appendix A, Ch. 1	
Wed	Jan 7	Frequency Distributions, Graphs,	Ch. 2	
Fri	Jan 9	Central Tendency	Ch. 3	
Mon	Jan 12*	Variability Ch. 4		HW1
Wed	Jan 14	Z-scores	Ch. 5	
Fri	Jan 16	Quiz 1	Chapters 1-4	
Mon	Jan 19	NO CLASS or Monday Lab – Martin Luther King, Jr. Holiday Thursday Labs <u>will</u> be held On Jan 22		
Wed	Jan 21*	Probability, Inference to Samples	Ch. 6, Ch. 7	HW2
Fri	Jan. 23	Standard Error, The Z <sub>x</sub> test	Ch. 7	
Mon	Jan 26*	Intro. to Hypothesis Testing	Ch. 8	HW3
Wed	Jan 28	More on Hypothesis Testing	Ch. 8	
Fri	Jan 30	Quiz 2	Chapters 5-7	
Mon	Feb 2*	One-Sample t-test	Ch. 9	HW4
Wed	Feb 4	Independent Samples t-test	Ch. 10	
Fri	Feb 6	Related Samples t-test	Ch. 11	
Mon	Feb 9*	Review of all t-tests Chs. 9-11		HW5
Wed	Feb 11	Introduction to analysis of variance (ANOVA)	Ch. 13	
Fri	Feb 13	Quiz 3	Chapters 8-11	
Mon	Feb 16	Two-way ANOVA I	Ch. 14.3	
Wed	Feb 18*	Two-way ANOVA II	Ch. 14.3	HW6
Fri	Feb 20	Effect size	Handout	
Mon	Feb 23*	Bivariate correlations, R-squared	Ch. 15.1-15.4	HW7
Wed	Feb 25	Linear regression	Ch. 15.6	
Fri	Feb 27	Quiz 4	Chapts. 13-14.3-15.4	
Mon	Mar 1*	Chi-Square Goodness of Fit	Ch. 16	HW8
Wed	Mar 3	Chi-Square Test of Independence	Ch. 16	
Fri	Mar 5	Which Test Do I Use?	A-70	
Mon	Mar 8*	Quarter in Review, Part I		HW9
Wed	Mar 10	Quarter in Review, Part II		
Fri	Mar 12	Quarter in Review, Part III		
Tues	Mar 16	Final Examination 10:15a-12:15p		

# **Tentative Schedule of Lecture Topics and Readings** (\*= Homework Due)

## Tentative Homework Due Date Schedule

Assignment	Chapts.	Assigned	Due in class	Handed back	Covered on
					Quiz/Exam
Homework 1	1-3	Jan 5	Jan 12	Jan 14	1/Jan 16
Homework 2	4-6 + SPSS	Jan 8	Jan 21	Jan 26	2/Jan 30
Homework 3	7 + SPSS	Jan 20	Jan 26	Jan 28	2/Jan 30
Homework 4	8-9 + SPSS	Jan 26	Feb 2	Feb 9	3/Feb 13
Homework 5	10-11 + SPSS	Feb 2	Feb 9	Feb 11	3/Feb 13
Homework 6	13 + SPSS	Feb 9	Feb 18	Feb 23	4/Feb 27
Homework 7	14,15.4 SPSS	Feb 16	Feb 23	Feb 25	4/Feb 27
Homework 8	15.6 + SPSS	Feb 23	Mar 1	Mar 8	Final
Homework 9	16	Mar 1	Mar 8	Mar 12	Final