Statistical Methods in Psychology:
Psych 302, Fall 2004

Fall 2004 CRN 14310

Lecture: Tu & Th 14:00-15:20, Straub 146, Arrow
Wednesday Labs: (1) 8:30-9:50 (Loucks), (2) Noon-13:20 (Tininenko) CRN 14311/14312
(all in180 Straub) (3) 14-15:20 (Loucks) & (4) 16-17:20 (Tininenko) CRN 14317/15324

Professor: Dr. Holly Arrow	**Contact info:** harrow@uoregon.edu, 346-1996	
Office: 357 Straub	**Office Hours:** Monday 1-2 and Friday 12-1	
Teaching Assistants:		**Office & Office Hours**
Jeff Loucks	jloucks@uoregon.edu, 346-4937	Straub 309, Monday 9-11
Jennifer Tininenko	jtininen@uoregon.edu, 346-1984	Straub 393, Friday 10-12

Hours lab room (180) is open: 8am-9pm Tues-Thurs, 8am-5pm Friday, closed weekends. Note: Frequent classes are scheduled in the lab during the day, so early evening hours are your best bet outside of labs.

Blackboard site: Please check Blackboard regularly (several times a week) for announcements, discussion, and materials such as lecture notes. Go to http://blackboard.uoregon.edu/ This should show up as a course that you are enrolled in. Your login and password will be whatever you use for your gladstone account.

OVERVIEW OF COURSE STRUCTURE

Course Description: This course will introduce you to descriptive and inferential statistics, teach you how to calculate statistics and analyze data using a computer statistics package, and improve your ability to understand and evaluate the statistical information reported in primary research articles.

Course Design: The course promotes active learning — through discussion, solving problems, writing responses, and computer exercises. The professor and TAs are guides, cheerleaders, and coaches. The course encourages teamwork among students, professor, and TAs. Group quizzes are completed collaboratively, and students are encouraged to work together on homework. One potential problem of team learning is that some students may rely too much on others and not master the material. So to pass the course ****you must demonstrate your competency as a statistician by passing the final exam.****

Small Group System: Students will work in small groups of 3-4 people in the same lab section. Group members should sit together during lecture and lab. You will complete group quizzes & work on problems together in lab. You will also review chapter responses from your group members and try to answer their questions and resolve their confusion. If a group member is absent, please pick up handouts for them and share notes. If you know you will be absent, alert someone in your group (you can use the Blackboard e-mail function). Group members keep track of attendance for their group, and evaluate each other's participation at the end of class.

GRADING

Responses to readings:	28 pts	(7 responses worth 4 pts each)
Homework sets:	172 pts	(9 sets, point values vary)
Quizzes:	45 pts	(3 quizzes worth 15 pts each)
Midterm:	35 pts	
Final exam:	100 pts	
Participation:	20 pts	(based on peer evaluations and TA reports)
Total	**400 pts**	

Course grades based on percentage of points earned			
A	93-100	C-	70-72.9
A-	90-92.9	D+	67-69.9
B+	87-89.9	D	63-66.9
B	83-86.9	D-	60-62.9
B-	80-82.9		If taking Pass/Fail
C+	77-79.9	N	< 70
C	73-76.9	P	70

* **Important Note:** To pass the course, ***you must pass the final*** to deTuesstrate adequate understanding of the course material. If you demonstrate competence by **passing the final** (earning at least 60 pts) you will earn the grade determined by the listed percentages. If you do especially well, and are close to a cutoff, you may be eligible for "mastery" points that push your course grade over the cutoff. ***Escape hatch:*** Students who fail the final but whose average grade on homework & quizzes is C- or above (at least 70% correct) may take an incomplete in the course and retake the final later.

RULES AND POLICIES

Students are sometimes confused about when collaboration is allowed. Here are the rules:

Collaborative Learning:
Group portion of quizzes, homework, participation, and studying for exams. Group quiz helps everyone understand the material better, because you actively discuss the problems. Discussing homework with other students, with TAs, and homework and study groups are encouraged. Talking over the problems and reworking them when you discover that others got different answers promotes deeper understanding of concepts. However, each student must submit a separate homework, and you must show your work (no photocopies or word-for-word copying).

Individual Work *(Collaboration = Cheating)*:
Your work on the **Final Exam,** the **Midterm,** and on **Individual Portion** of **Quizzes** must be your own. Copying the work of others on these elements will be considered cheating, and if detected, will earn you an F or N for the course. (The University may impose additional penalties in accordance with the student conduct code.) On exams, you may consult any materials that you have brought to the room, but you may not consult with others. Individual quizzes (closed book, closed notes), rely on your own memory and calculator only. Multiple versions of the exams will be created to help protect you against temptation.

	Topic	Reading	Responses, Quizzes
Week Nine	(Mon, Nov 22: **Hwk #8 due by 2**)		
Tues, Nov 23:	*Chi-Square, Goodness of Fit* [Study guide for final handed out]	Ch 16	**Response#7, Ch 16*
Thurs, Nov 25:	*Thanksgiving, No Class*		
Week Ten	(Mon, Nov 29: **Hwk #9 due by 2**)		*No response this week*
Tues, Nov 30	*Chi-Square, Independence*	Ch 16	
Thurs, Dec 2:	*Applications and review* Class & groupmate evaluations		

FINAL EXAM on Thurs, Dec 9, 13:00-15:00, 146 Straub (our regular room).

** Bring CALCULATOR, BOOK, NOTES **

HOMEWORK ASSIGNMENTS

*Due Monday by 2 PM. *Put your name and lab number (1, 2, 3, or 4) on all homework.*

Problems are at the end of each chapter. You will have a chance in labs to work on computer homework. **Turn homework in on time! Late homework** earns *half* credit; *no* credit if over a week late ***unless your TA approves this in advance.*** To earn full credit, *show and explain all work.* For problems completed by hand, show all steps. **Annotate** SPSS output to receive full credit. Circle the most important numbers and explain (write or type directly and legibly on the output) what they mean. You must demonstrate that you are able to read and understand what you have produced. The book has answers to odd-numbered problems in the back.

Homework 1: Concepts, Scaling, Frequency Tables and Histograms (16 pts)
Ch 1 (p. 27): problems 5,10, 14 & 18; Ch 2, problem 8. You may do problem 8 either using SPSS or by hand. Do not group. [TIP: if SPSS is "grouping" when you don't want it to, click Bar Graph instead of Histogram.] Label your axes! If you use SPSS for problem 8, be sure to include the output, clearly identify which parts of the output go with the homework question, and don't forget part c of the question.

Points: Problems 5, 10,14: 2 pts each; problem 18, 4 pts, problem 8, 6 pts.

Homework 2: Central Tendency & Variability (16 pts)
Ch 3, problems 9 & 10. Ch 4, problem #13 (by hand, using the computational formula) & Ch. 4, #14. Do problem 14 **first** by hand, showing all steps and using definitional formula (step 1) and then **again** using SPSS. Use SPSS to find the mean, sample variance, and standard deviation for the data (step 2). NOTE: SPSS will automatically treat the data as a *sample,* not a population. Then (**ADDITIONAL**step 3) change the numbers around until you have a data set with the SAME mean and n, but twice the sample variance as the original data set (use trial and error method!). Include output from SPSS showing the mean, variance, & sd for original and altered data sets, annotate to clarify which parts of the printout go with steps 2 & 3, and include the numbers in the altered data set you created for step 3.

Points: Ch 3, 9&10, 2 pts, Ch 4, #13, 4 pts; #14 (by hand, SPSS, extra step): 8 pts.

TOP FIVE PITFALLS:

1. Passive listening and reading

Write, draw, figure. Think with a pencil to learn. Turn the concepts into something you do. To succeed, you must be able to explain and execute.

2. Spectator overconfidence

Watching someone go through the steps is a starting point only. You have to get in the pool to learn how to swim.

3. Beginner's luck

Doing it right once doesn't mean you can repeat the trick. Get it wrong to understand how the process works. Mistakes help you learn.

4. Trying to cram

You can cram content, but skills, like water, don't compress. Don't fall behind; it's too hard to catch up.

5. Giving up because you get stuck

Everyone gets stuck. Try a new tack. ***Ask for help.*** Play around. Math is all about getting stuck and unstuck.

THREE WAYS TO DO WELL

1. Keep up and keep trying

Read assigned chapters early and often, come to lecture, start on homework immediately so you will finish on time. If you keep up and keep trying, the concepts will eventually sink in. Turn your homework in on time. Slog through those chapters even if you only understand half of what you read. The fog will clear if you just persist. Don't give up!

2. Work hard on understanding material in the first half of the course

If you have a pretty good feel for the concepts in the first half, the second half will deepen your understanding. If you don't grasp the concepts in the first half, the second half will make no sense. Seek help *early* when you are feeling lost.

3. Stay in touch, and speak up

Come to office hours. You have an experienced instructor and two dedicated TAs, and we want to help! Ask questions--in class, in lab, in your responses, on Blackboard. Forming a clear question helps you discover what you do and do not understand, which is vital to mastering this subject.