PSYC 3101 100
STATISTICS AND RESEARCH METHODS
IN PSYCHOLOGY
Spring, 1999
3:00 - 3:50 MWF
Educ 220

Professor: Dr. Diane Martichuski
Office: Muen D251E
Email: dmartich@psych.colorado.edu
Phone: 492-4246

Office Hours: Tues 1-4, Wed 10-11:30, or by appt.

Website for class: Link from http://psych-www.colorado.edu


Teaching Assistants:

Tani Newell
Phone: 492-1608
email: tani@colorado.edu
Office hours: M 4-5, T 1-2 (D316A)

Jeff Richards
Phone: 735-2137
email: jeff@psych.colorado.edu
Office hours: (D316D)

Recitation Sections (You must be registered for one of these):

<table>
<thead>
<tr>
<th>Section</th>
<th>Time</th>
<th>Location</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>L110</td>
<td>1:00 - 2:50 M</td>
<td>Muen D346</td>
<td>Tani</td>
</tr>
<tr>
<td>L111</td>
<td>10:00 - 11:50 T</td>
<td>Muen D346</td>
<td>Tani</td>
</tr>
<tr>
<td>L112</td>
<td>1:00 - 2:50 W</td>
<td>Muen D346</td>
<td>Jeff</td>
</tr>
<tr>
<td>L113</td>
<td>cancelled</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L114</td>
<td>2:00 - 3:50 R</td>
<td>Muen D346</td>
<td>Tani</td>
</tr>
<tr>
<td>L115</td>
<td>9:00 - 10:50 F</td>
<td>Muen E0014</td>
<td>Jeff</td>
</tr>
</tbody>
</table>

COURSE GOALS AND OBJECTIVES
Students will demonstrate knowledge of basic statistical measures, including descriptive measures of central tendency, variability, and frequency and probability, and inferential measures of t-tests, analyses of variance, correlation, linear regression, and chi-square. Students will also learn to use statistical software, and will learn basic methods for conducting research.
REQUIREMENTS

1. Students are expected to read the assigned chapters in both books. The chapters in Stanovich should be read BEFORE labs.

2. Four exams will be given. The three (statistics, unit) exams will each be worth 100 points. The lab methods exam will be worth 50 points and will be combined with the exam for unit three. The final (comprehensive) exam will be worth 200 points. Students may not share books, calculators, or computers during exams. Makeup exams will only be given in extreme cases, and will occur during finals week (exceptions are students on official university business who should arrange to take the exam early).

In order to assist each individual to perform to his/her potential, it is important for a student to inform the professor of any conditions which may require some modification of seating, testing, or other class requirements/practices.

3. You need a calculator of some kind. It will be to your advantage to get a calculator with statistical functions on it (e.g., $\Sigma X$, $\Sigma X^2$, $\Sigma Y$).

4. Homework assignments: Homework assignments will be due for a chapter the next lab period after we finish that chapter in lab (except when exams fall on the next day). Some homework assignments will be from the textbook; others will require the use of the computer system. Homework assignments total 100 points. You must turn in your own copy, but you can work in pairs.

5. Attendance is required in labs. I highly recommend that you attend all lectures because we will be moving quickly through the material. If you fall behind, it will become increasingly difficult to catch up as the semester progresses. Students who wish to read the paper, sleep, or have private conversations should not come to class.

6. In order to learn material about statistics AND methods, students will primarily discuss statistics in class and methods in lab. Both are needed to conduct valid research in psychology.

GRADING  A course grade will be assigned to each student according to the student's percentage of the total course points (650).

<table>
<thead>
<tr>
<th>Item</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 tests (2x100+1x150+1x200)</td>
<td>550 pts</td>
</tr>
<tr>
<td>Homework assignments</td>
<td>100 pts</td>
</tr>
<tr>
<td>Total</td>
<td>650 pts</td>
</tr>
</tbody>
</table>
TOPICS AND SCHEDULE:

Week beginning: Chapter(s)

1/11  
CLASS: Hurlburt 1, 2  
Homework (HW) Ch 1: 1-13, 15-16  
HW Ch 2: 1-2, 4-15, 17, 21-23  
No recitations (labs) this week

1/18  
Martin Luther King, Jr. holiday, Jan 18  
CLASS: Hurlburt 3, 4  
HW Ch 3: 1, 2, 4, 6, 8, 9, 12, 14, 18, 27  
HW CH 4: 1(not a), 3 (not a,d), 5 & 6 (measures of CT only), 9, 11, 12, 13, 29 (a and c only)  
LAB (starts Tuesday, 1/19) Stanovich 1, 2; work on homework

1/25  
CLASS: Hurlburt 5, 6  
HW Ch 5: 1 & 2 (not b or d), 6 (d,e,g,h), 9, 11, 15, 16, 18  
LAB Stanovich 3; work on homework

2/01  
CLASS: Hurlburt 6, 7  
HW Ch 6 (no interpolation required): 1, 4-17, 30 (no eyeball), 34  
LAB Stanovich 4; work on homework if time permits

2/08  
Test 1 (chaps 1-6 Hurlburt): Wed, Feb 10  
CLASS: Hurlburt 7, 8  
HW Ch 7: 1, 5-10, 13, 14 (NOTE: on #9, there are only 150 student scores)  
LAB Stanovich 5,6; work on homework if time permits

2/15  
CLASS: Hurlburt 8, 9  
HW Ch 8: 1-7, 11 & 12 (no eyeball)  
HW Ch 9: 1-9, 12, 14 (a and b only)  
LAB Stanovich 5, 6; work on homework if time permits

2/22  
CLASS: Hurlburt 10  
HW Ch 10: 1 & 2 (show 4 steps, do prob with $\alpha = .05$ and test statistic), 3 (do #2 with s unknown), 4 & 5 & 6 (do 4 steps and test stat only)  
LAB Stanovich 7, 8; work on homework if time permits

3/01  
Test 2 (chaps 7-10 Hurlburt): Friday, March 5  
CLASS: Methods lecture (review of Stanovich material)
3/08  CLASS: Hurlburt 11, 12; Methods lecture (between- vs. within-subjects designs, sampling, sources of error)
HW Ch 11: (by-hand and computer for ch. 11) 2 - 4 (do t-test and draw conclusions only), and 5 (computer not possible for #5)
HW Ch 12: 1, 2, 3 - 5 (4 steps, test stat only), 6
LAB computer training, work on homework

3/15  CLASS: Hurlburt 13, 14, Methods overview
HW Ch 13: 1, 2, 11, 18, 27 (FOR ALL PROBLEMS, do 4 steps, analyze data on computer only, draw conclusions, use Fisher's where appropriate)
LAB computer training, work on homework

3/22  Spring Break – No classes

3/29  CLASS: Hurlburt 14, 15
HW Ch 14: 1, 4, 9, 17, 23 (4 steps, computer, draw conclusions)
LAB work on homework

4/05  CLASS: Hurlburt 15
HW Ch 15: 4, 13, 16, 22, 31, 33 (FOR ALL PROBLEMS, do computer analysis, draw conclusions)
LAB work on homework

4/12  CLASS: Hurlburt 16
Test 3 (chaps 11-15): In class portion – Friday, April 16
Lab portion in lab during this week

4/19  CLASS: Hurlburt 16, 17
HW Ch 16: 1, 2, 4, 11 (FOR ALL PROBS: scatterplot, r, test H0 with computer)
LAB work on homework

4/26  CLASS: Hurlburt 17, 18
HW Ch 17: 1, 2, 4, 11 (continue ch. 16 - reg line, predict y for x=4 and predict y for x=15 if there is a significant correlation. Which of these predictions is useless?)
HW Ch 18: 1, 2, 12 (do stat only, draw conclusions)
LAB work on homework

5/03  Review (last class meeting is Monday, May 3)

5/06-5/12 Finals week FINAL EXAM: Tuesday, MAY 11, 7:30 - 10:30 pm

NOTE: The final exam will take place on the final exam day, Tuesday, May 11, in the main lab (D346) at one of the following times: 8 - 10 am, 10:30 - 12:30, 1 - 3 pm, 3:30-5:30 pm, or 6 - 8 pm.