PSYC 3101  100
STATISTICS AND RESEARCH METHODS
IN PSYCHOLOGY
Spring, 2000
11 - 12:15 TR Muen E0046

<table>
<thead>
<tr>
<th>Dr. Diane Martichuski</th>
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<tr>
<td>Office:</td>
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<td>Muenzinger D251-E</td>
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<tr>
<td>Phone:</td>
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<tr>
<td>492-4246</td>
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<tr>
<td>Office Hours:</td>
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<tr>
<td>M 1:30 - 3:30, R 9-10 am, or by appt.</td>
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<td>E-mail Address:</td>
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<td><a href="mailto:cmartich@psych.colorado.edu">cmartich@psych.colorado.edu</a></td>
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Website for class: Link from [http://psych-www.colorado.edu](http://psych-www.colorado.edu)


Textbooks on Reserve at Norlin Library (24-hour reserve):

**The reserve texts might be useful for further clarification in the methods section of the class.**

Graduate Teaching Assistants:

**Rita Butterfield**
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**Beth Darnall**
Email: darnall@psych.colorado.edu
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Recitation Sections (You must be registered for one of these):

<table>
<thead>
<tr>
<th>L110</th>
<th>11:00 - 12:50 M</th>
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<tr>
<td>Muen</td>
<td>E0014</td>
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<td>L111</td>
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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.

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. Please discuss options with the professor in the first two weeks of class.

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 roughly the next lab period after we finish that chapter in class (except when exams fall on the next day; announcements will be made in class). 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 not required in labs or in class (i.e., you will not be given an attendance grade for either). I highly recommend that you attend all lectures and labs 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, Dr. Martichusk will teach a short section primarily on methods first, and will teach statistics after that. Both are needed to conduct valid research in psychology and both will be discussed throughout the class. Although the methods lecture section occurs in January, the methods test is associated with exam #3.

GRADING

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

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

Week beginning: Chapter(s)

1/17  Methods lectures in class (see books on reserve for further reading)
      No recitations this week

1/24  Methods lectures in class (see books on reserve for further reading)
      Recitations begin Wed of this week

1/31  Hurlburt chapters 1, 2, 3
      Homework (HW) Ch 1: 1-13, 15-16
      HW Ch 2: 1-2, 4-6, 8, 11, 13-15, 21-23

2/07  Hurlburt chapters 3, 4, 5
      HW Ch 3: 1, 2, 4, 6, 8, 9, 12, 14, 27
      HW CH 4: 1 (not a), 3 (not a,d), 5 & 6 (measures of CT only),
             12, 13, 29 (a and c only)
      HW Ch 5: 1 & 2 (not b or d), 6 (d,e,g,h), 9, 11, 15, 16, 18

2/14  Hurlburt chapters 5, 6
      HW Ch 6 (no interpolation required): 1, 4-17, 30 (no eyeball), 34

2/21  Hurlburt chapter 6
      Test 1, Thursday, Feb 24, Hurlburt chaps 1-6 and stats lecture

2/28  Hurlburt chapters 7, 8
      HW Ch 7: 1, 5-10, 13, 14 (NOTE: on #9, there are only 150 student
             scores)
      HW Ch 8: 1-7, 11 & 12 (no eyeball)

3/06  Hurlburt chapters 9, 10
      HW Ch 9: 1-9, 12, 14 (a and b only)
      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)

3/13  Hurlburt chapter 10
      Test 2, Thursday, March 16, Hurlburt chaps 7-10 and stat lectures

3/20  Hurlburt chapters 11, 12
      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 (by hand and computer), 3 - 5 (computer only, 4
                 steps, test stat only), 6
      LAB -- computer training
3/27 Spring Break (no classes)

4/03 Hurlburt chapters 13, 14
   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)
   HW Ch 14: 1, 4, 9, 17, 23 (4 steps, computer, draw conclusions, use post hoc tests where appropriate)

4/10 Hurlburt chapter 15
   HW Ch 15: 4, 13, 16, 22, 31, 33 (FOR ALL PROBLEMS, do computer analysis, draw conclusions)

4/17 Test 3 --
   IN CLASS portion - Tuesday, April 18, Hurlburt chaps 11-15, methods and stat lectures (worth 70 pts)
   IN LAB portion in each lab (worth 80 pts)
   Thurs in class - Hurlburt chapter 16
   HW Ch 16: 1, 2, 4, 11 (FOR ALL PROBS: scatterplot, r, test H0 with computer)

4/24 Hurlburt chapters 16, 17
   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?)

5/01 Hurlburt chapter 18, review
   HW Ch 18: 1, 2, 12 (do stat only, draw conclusions)

5/06-5/11 Finals week FINAL EXAM TIME: Saturday, May 6, 10:30 - 1 pm

NOTE: The final exam will take place on the final exam day, Saturday, May 6, in the main lab (E0014) 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.