Psychology 3101: Research Methods and Data Analysis in Psychology  
Spring, 2004

Charles (Chick) Judd  
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303-492-7492

course web page: http://psych.colorado.edu/~juddstat/3101/psych3101.htm

Teaching Assistants:

Arnica Buckner  
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Office hours: Thurs. 9-11

Eunice Kim  
Office: D316C  
kieymey@psych.colorado.edu  
Office hours: Tues. 1-3

Jordan Pennefather  
Office: E314  
pennefat@psych.colorado.edu  
Office hours: Tues. 1:30-3:30

Lectures:  
11:00 – 12:15 Tues. and Thurs.  
Muenzinger E0046

Labs: L110  
9:00 – 10:50 Mon.  
Muenzinger E0014  
Kim

L111  
8:00 – 9:50 Tues.  
Muenzinger E0014  
Buckner

L112  
9:00 – 10:50 Wed.  
Muenzinger E0014  
Pennefather

L113  
9:00 – 10:50 Thurs.  
Muenzinger E0014  
Pennefather

L114  
11:00 – 12:50 Fri.  
Muenzinger E0014  
Pennefather

General purposes of the course:
1) To facilitate critical evaluations of claims to truth made by psychologists or in everyday life.
2) To facilitate intellectual access to journals and books in psychology.
3) To provide an introduction to the conducting and reporting of psychological research.
4) To provide an introduction to computerized data analysis.

Course requirements:
1) Homework assignments and quizzes in the laboratory. Weekly homework assignments will be given. Quizzes will take place every two to three weeks. Grades on the assignments and quizzes will be combined to yield an overall laboratory grade.
2) Two hourly exams. The first one will be on Feb. 26; the second will be on April 8.
3) Final exam on May 3, covering the entire semester.

Exam grading policy
Letter grades on exams will be computed using percentage scores calibrated to the average scores of the two individuals earning the most points in the class on any given exam. Anyone earning 90% of the points earned by those top two scorers will receive an A- or above; anyone earning 80% of the points earned by those top two scorers will receive a B- or above; and so forth.

Derivation of final grade:
Laboratory grade: 30%
First hourly exam: 20%
Second hourly exam: 20%
Final exam: 30%
Psychology 3101: Research and Data Analysis in Psychology

Required readings:
The basic text for the course is:
Belmont, CA: Duxbury Press.
During the first few weeks, there will also be required readings from:
Wadsworth. The required chapters are on reserve in Norlin.

Course Outline

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
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<tbody>
<tr>
<td>Jan. 13</td>
<td>Introduction</td>
</tr>
<tr>
<td>Jan. 15 – Jan. 22</td>
<td>Naive vs. scientific approaches to understanding behavior.</td>
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<td>Criteria for evaluating research.</td>
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<td>Validity and reliability: How do we measure what we want to measure?</td>
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<td>Research design: What designs are good for what purposes?</td>
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<td>Readings:</td>
<td>Hoyle, Harris, &amp; Judd: Chapters 1-2</td>
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<td>Jan 27 – Feb. 5</td>
<td>Descriptive statistics: Frequency distributions, measures of</td>
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<td>central tendency, variability, relative location.</td>
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<td>Readings:</td>
<td>Hoyle, Harris, &amp; Judd: Chapter 17</td>
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<td>Howell Chapters 1-5</td>
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<td>Feb. 10 – Feb. 24</td>
<td>The logic of inferential statistics: Probability, sampling</td>
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<td>distributions, confidence intervals; Single sample t-test.</td>
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<td>Readings:</td>
<td>Howell: Chapters 6 - 8, 12</td>
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<td>Feb. 26</td>
<td>First Midterm Exam</td>
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<td>Mar. 2 – Mar. 9</td>
<td>Inferences about the difference between two means; Related and</td>
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<td>independent samples</td>
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<td>Readings:</td>
<td>Howell: Chapters 13 - 14</td>
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<td>Mar. 11 – Mar. 16</td>
<td>Statistical power</td>
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<td>Readings:</td>
<td>Howell: Chapter 15</td>
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<td>Mar. 18 – Apr. 6</td>
<td>Analysis of variance</td>
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<td>Readings:</td>
<td>Howell: Chapters 16 - 17</td>
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<td>Apr. 8</td>
<td>Second Midterm Exam</td>
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<td>Apr. 13 – Apr. 29</td>
<td>Simple regression and correlation</td>
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<td>Readings:</td>
<td>Howell: Chapters 9 - 10</td>
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<td>May 3</td>
<td>Final Exam (4:30 - 7:00 p.m.)</td>
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