Psychology 3101: Research Methods and Data Analysis in Psychology

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Lectures: Tues. Thurs. 12:30 – 1:45
Muenzinger E0046

Labs: L210 11:00 - 12:50 Mon.
L211 9:00 - 10:50 Tues.
L212 1:00 - 2:50 Wed.
L213 10:00 - 11:50 Thurs.
L214 1:00 - 2:50 Fri.
Muenzinger D346  B. Heywood
Muenzinger D346  B. Fasolo
Muenzinger D346  B. Heywood
Muenzinger D346  B. Fasolo
Muenzinger D346  B. Heywood

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 Oct. 7; the second will be on Nov. 11.
3) Final exam on December 13, covering the entire semester.

Derivation of final grade:
Laboratory grade: 30%
First hourly exam: 20%
Second hourly exam: 20%
Final exam: 30%

Required readings:
The basic text for the course is:

During the first few weeks, there will also be required readings from:
Course Outline

Aug. 24
Introduction

Aug. 26 – Sept. 2
Naive vs. scientific approaches to understanding behavior.
Criteria for evaluating research.
Validity and reliability: How do we measure what we want to measure?
Research design: What designs are good for what purposes?

Readings: Judd, Smith, & Kidder: Chapters 1-2

Sept. 7 – Sept. 16
Descriptive statistics: Frequency distributions, measures of central tendency, variability, relative location.

Readings: Judd, Smith, & Kidder: Chapter 15
Howell: Chapters 1-5

Sept. 21 – Oct. 5
The logic of inferential statistics: Probability, sampling distributions, confidence intervals.
Single sample t-test.

Readings: Howell: Chapters 6 - 8, 12

Oct. 7
First Midterm Exam

Oct. 12 – Oct. 19
Inferences about the difference between two means; Related and independent samples

Readings: Howell: Chapters 13 -14

Oct. 21 – Oct. 26
Statistical power
Readings: Howell: Chapter 15

Oct. 28 – Nov. 9
Analysis of variance

Readings: Howell Chapters 16 - 17

Nov. 11
Second Midterm Exam

Nov. 16 – Dec. 7
Correlation; Simple and multiple regression

Readings: Howell Chapters 9 - 11

Dec. 13
Final Exam (11:30 - 2:30 p.m.)