Professor: Margaret Rosario, Ph.D.
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Day & Time: Tuesday 2-3:45 and Thursday 9:45-11:25
Thursday 10:30-11:25
Office Hours: By appointment

Course Overview:
This course provides an introduction to inferential statistics. Tuesday is a lecture. Thursday is for review and conceptually based homework during the first part of the session. The last hour of the Thursday session is for the computer lab and its exercises; bring a flash drive to lab.

Most of September is devoted to reviewing undergraduate statistics. Computer lab is not scheduled during this time. The following undergraduate text is recommended for those in search of a reference: Grimm, L.G. (1993). *Statistical applications for the behavioral sciences*. New York: Wiley.

Course Objectives:
By the end of this course, you will have knowledge of basic statistics and SPSSx.

Requirements and Grading:
Three examinations are scheduled. The first one addresses undergraduate statistics and counts toward 10% of the final grade. The second concerns power and accounts for 30% of the total grade. The third examination covers the material from and including power through split-plot analysis; the exam comprises 60% of the grade. In addition, the computer lab is rated pass/fail and a failing grade will lower the final course grade by a third (e.g., from B to B-). An optional project may be available to boost the final grade.


Required Texts (available in the CCNY bookstore):

**Recommended Statistical Software:**
*SPSS Graduate Pack* can be obtained for a reasonable price from www.journeyed.com. However, doctoral-student fees make SPSSx accessible by means of a GC portal.

**Weekly Reading Assignments and Class Topics:**

August 30  Introduction. Review probability, definitions, and scales.

September 1  Review central tendency and variability.

September 6  Review transformations, hypothesis testing, and z test and t-test.

September 8  Review of t-test and dependent t-test.

September 13  Review Pearson correlation coefficient, \( r \).

September 15  Review non-parametric statistics: chi-square (\( \chi^2 \)) and, time permitting, others

September 20  **Examination on undergraduate statistics.**

September 22  Review examination.

September 27  Concept of statistical power, Cohen’s \( d \), and power for the \( t \)-test (Chapters 1 and 2 of Cohen).

September 29  **No class, as per CUNY**

October 4  Homework assignment #1 (handout). Statistical power for \( r \) and difference between two \( r \)’s (Chapters 3 and 4 of Cohen). *(We will meet, although CUNY follows the Friday schedule.)*

October 6  Continue with power. Homework assignment #2 (handout).

October 11  **Second examination on statistical power**

October 13  Review examination. **Computer lab begins.**

October 18  ANOVA (Chapter 8 of Myers et al., pp. 169-195)

October 20  Homework assignment #3, items 1-16 (handout). For ANOVA lab, problem #8A in Kirk (p.208).

October 25  Multiple Comparisons (Chapter 10 of Myers et al., pp. 238-265).
October 27    Multiple Comparisons (cont.). Homework assignment #3, items 17-18 (handout). No computer lab.

November 1&3  No class; Professor at conferences

November 8   Factorial Design (Chapter 9 of Myers, pp. 200-231).

November 10  Factorial Design (cont.). For lab, problem #8A in Kirk (p.208), compute protected $t$-test, Tukey HSD, and Scheffé; compare and contrast the results. Lab: Problem # 6A for factorial design in Kirk (pp. 432-433). Conclusions.

November 15  Homework assignment #4 for factorial design. Randomized Blocks (Chapter 13 of Myers et al., pp. 309-319).

November 17  Repeated measures (Myers et al.: chapter 13, pp. 319-323; and chapter 14, pp. 332-346 and 353-355). For lab on randomized blocks, problem # 7A in Kirk (pp. 308-309) and conclusions.

November 22  Repeated measures (cont). Homework assignment #5 (handout). (We follow the Tuesday schedule.)

November 24  No meeting; Thanksgiving

November 29  Split Plot (Chapter 15 of Myers et al., pp. 362-372).

December 1    Split Plot (cont). For lab, on split plot, problem #8A in Kirk (pp. 581-582) and conclusions.

December 6    Split Plot (cont.) Homework assignment #6 (handout).

December 8    Review. No computer lab

December 13   Third examination.