MAT 750: Statistical Consulting

Instructor

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Class Hours TTh 2:00 p.m.- 3:20 p.m.

Office Hours W 11:00 p.m.-noon, Th 11 a.m.-noon, and by appointment

<u>Course Objective</u>: The goal is to develop skills needed by a statistical consultant and to expose students to a wide range of statistical applications. Topics include data analysis, problem solving, issues in planning experiments, collecting data, report writing, and oral communication with clients.

<u>Course Outline</u>: We will spend first several weeks to review important and frequently used statistical analyses. Then, we will go over case studies and have class discussion on actual problems, either from clients or from the instructor's database. Guest lectures are also planned on topics summarizing the guests' consulting experiences.

<u>Text (recommended)</u>: Statistical Consulting, J. Cabrera and A. McDougall, Springer

References:

- An Introduction to Statistical Methods and Data Analysis, 6th edition, R. Lyman Ott and Micheal T. Longnecker, Brooks/Cole
- Applied Regression Analysis, 3rd edition, N. Draper and H. Smith, Wiley
- Modern Applied Statistics with S, 4th edition, W. Venables and B. Ripley, Springer
- Applied Statistics and the SAS programming Language, 5th edition, R. Cody and J. Smith, Prentice-Hall

<u>Prerequisite</u>: Course work in applied statistics and data analysis or consent from the instructor

<u>Assignments</u>: There will be a major data analysis project for which a written report is required. In addition, there will be a number of in-class assignments on a variety of topics that would require written reports and presentations.

Course Schedule

Week 1 - Week 4 : Review of t-tests, ANOVA, Regression, and Statistical packages Week 5 - Week 15 : Case studies, Guest speakers, Consulting practice sessions

** Final project due: Noon, May 5 (Tuesday)

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