STAT 428 Introduction to Probability and Statistics II  
Autumn quarter 2006

Lecture: MWF 11:30 - 12:18 PM in CH 218  
Text: Probability and Statistics for Engineers and Scientists (3rd edition), by Anthony J. Hayter

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Course web page: http://www.stat.ohio-state.edu/~yklee/428/

Course Description

Statistics 428 is the second course in a two quarter sequence in Probability and Statistics for Engineering and the Sciences. Statistics 427 or equivalent knowledge is prerequisite for the course. It aims to introduce descriptive statistics, point estimation, basic statistical procedures for inference such as confidence intervals and hypothesis testing, and simple linear regression for describing relationship between two variables. The course will help you to understand mathematical principles and statistical reasoning for drawing conclusions based on quantitative data.

Topics

- Descriptive Statistics (Chapter 6):
  Statistical methods for organizing and describing data, graphical procedures and descriptive numerical measures for a variable

- Statistical Estimation and Sampling Distributions (Chapter 7):
  Estimation of population parameters, desirable properties of estimators, sampling distributions, and general methods of estimation

- Inferences on a Population Mean (Chapter 8):
  Confidence intervals and hypothesis testing based on $z$ or $t$-statistic
• Simple Linear Regression (Chapter 12.1-12.7)

Simple linear regression model, least squares method, inference on the slope and the mean response at a new value of $x$, Analysis of Variance table, and model checking

Grading

Homework: 20%
Midterm 1: 25% (approximately after Chapter 7 is finished)
Midterm 2: 25% (approximately after Chapter 8 is finished)
Final exam: 30% (on December 4, Monday, 11:30 AM - 1:18 PM)

Exam rules: For the midterms you may bring one standard sized sheet of notes. For the final exam, two sheets will be allowed. The final exam will not be cumulative. A basic calculator will be necessary for the exams.

Homework Assignments

Homework will be collected approximately weekly, making for about 7 homework assignments. Homework assignments and solutions will be posted on the course web page. Homework must be turned in by 5:00 PM on the due date. (Submit homework in class or put it in the Stat 428 drop box outside 413 Cockins Hall. The drop box is on the left side of the door. When putting homework in the drop box, make sure that the course name-428, your instructor’s name, and your grader’s name are on your homework.) No late assignments will be accepted. Some data analyses for the course will be done on the computer using MINITAB. When you put together your homework solutions, cut and paste your computer output into the body of your work.

Academic Misconduct

Although students are encouraged to work together on assignments, each student is expected to submit an individual write-up. Academic misconduct will not be tolerated.

Special Accommodations

Any student who feels that she/he may need an accommodation based on the impact of a disability should contact the instructor privately to discuss your specific needs. We will work with you and the Office of Disability Services (ODS) at 292-3307 in 150 Pomerene Hall to coordinate reasonable accommodations for the course. ODS forms must be given to your instructor as early in the quarter as possible to be filled out and returned to you.