STAT 528 Data Analysis I
Winter Quarter 2009

Lecture: MWF 1:30-2:18PM in CH 312

Instructor: Yoonkyung Lee
Office: 440B Cockins Hall
Phone: 292-9495
Office Hours: T 1:30-2:18PM and R 2:30-3:18PM or by appointment
Email: yklee@stat.osu.edu

Grader: Aaron Quan
Office: 417 Math Building
Phone: 292-9231
Office Hours: by appointment only
Email: ajq@stat.osu.edu or quan.19@osu.edu

Text: Introduction to the Practice of Statistics (the sixth edition)
by Moore, McCabe, and Craig.
The book is on reserve in the Science and Engineering Library (SEL).

Course web page: http://www.stat.osu.edu/∼yklee/528

Course Description

Statistics 528 is the first course in a three quarter sequence of data analysis (Stat 528, 529 and 530). The main focus is to introduce descriptive statistics, probability and statistical inference. It is intended for students from various fields of study to learn basic concepts and tools for statistical reasoning. The second course, Stat 529, will provide more advanced statistical tools or methods used in scientific investigations. Completion of this sequence will help you to understand quantitative analyses and conclusions contained in many of the journal articles in your field, and to communicate with a statistician more effectively later. Stat 528 is non-calculus based and there are no formal prerequisites for the course. Stat 528, 529 and 530 are required for a Graduate Minor in Statistical Data Analysis.

Topics

- Statistical methods for organizing and describing data - graphical procedures and descriptive numerical measures (chapter 1).

- Basic principles in data collection procedure for scientific investigation (chapter 3).

- The concept of the probability, random variables, and basic probability rules. Basic probability models such as binomial and normal distributions. The notion of sampling distributions (chapters 4 and 5).

- Statistical inference - confidence intervals and hypothesis testing for a population mean (chapters 6 and 7).

- Inference for a population proportion and comparison of two proportions (chapter 8).

- Analysis of two-way tables (chapter 9).

Grading

Midterm: 35% (around February 11 after Chapter 5 is finished).
Final exam: 45% (on Wednesday, March 18 1:30-3:18PM).
For the midterm you may bring one letter 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 both exams.
Homework: 20%
There will be approximately weekly assignments. Homework problems and solutions will be posted on the course web page.

Computing

You will be required to do some basic statistical analyses on the computer using MINITAB for your assignments. The university has a site license for MINITAB on the IBM PC platforms. For a current list of public computing sites at OSU with MINITAB or any other software, go to the web site `http://scc.osu.edu/software/software_search.php`, which is also linked from the course web site.

Academic Misconduct

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term academic misconduct includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct (`http://studentaffairs.osu.edu/info_for_students/csc.asc`).

Special Accommodations

Students with disabilities that have been certified by the Office for Disability Services will be appropriately accommodated, and should inform the instructor as soon as possible of their needs. The Office for Disability Services is located in 150 Pomerene Hall, 1760 Neil Avenue; telephone 292-3307, TDD 292-0901; `http://www.ods.ohio-state.edu/`.