STAT 202-0 Section 23 Fall 2013

Northwestern University

Introduction to Statistics

Course Information

Instructor	Jiangtao Gou Doctoral candidate in Statistics at Northwestern University 2006 Sheridan Road, Room 206, Evanston, IL 60208 jgou@u.northwestern.edu Office Hour: Wednesday, 9-11am or by appointment
Class Information	Monday, Wednesday and Friday, 3-3:50PM at University Hall 318
Prerequisites	High school math courses: Algebra, Geometry, Pre-Calculus.
Text	The Basic Practice of Statistics by David S. Moore, 5th Edition. Online materials <http://www.whfreeman.com/bps5e>
Course Description	Statistics is a very useful tool of science. On the other hand, statistics is often misused in the media to manipulate public opinion. This course is designed to introduce essential statistical concepts and methods, motivate students to use statistics in daily life, and help develop critical thinking skills in statistics. It covers data collection and summary, correlation, simple regression, probability, frequency distribution, sampling, experimental design, estimation, confidence intervals, tests of significance, and two-sample comparisons. This introductory course does not require calculus and makes minimal use of formal mathematics.
Objective	Students will be able to describe statistical procedures, explain how to use statistical methods and their limitation, prepare a survey or a data collection plan, diagram and analyze data, persuade and conclude statistically.
Calculators	Students may need to have access to a calculator for use on homework and exams.

Software	Students may consult with me about any statistical software (e.g. Excel, SPSS, Stata, JMP, R) if they need to use them in their homework or course projects.
Homework	Students will do weekly homework assignments, typically 6 (or less than 6) questions per week. There are 5 questions (or less) from the textbook, and 1 practical question. You are encouraged to discuss these problems with me or with other students. There are 6 homework assignments. They will be assigned on Friday, October 4, 11, 18, November 1, 8, 15.
Exams	No quiz in class. Midterm: October 28, Monday, 3-3:50pm. In class, open-book. Final Exam: December 13, Friday, 3-5pm. Open-book. For midterm and final exams, I strongly recommend that you prepare sheets of formula ahead so you are able to review all materials.
Course Project	Basically students will work as an applied statistician on some data and try to draw conclusion or gave suggestion based on these data. Students are encouraged to discuss with anyone for their course project. Every group of students need to hand in a project report (2-3 pages). Students may collect data from public database, or use your own experience to collect data yourself.
Presentation	Fall 2013 Stat 202 Statistics Research Colloquium November 25, Monday, 3-3:50pm. University Hall 318.
Grading	Homework 20% (Textbook Questions 10%, Practical Questions 10%) Midterm 20% Final 30% Project 30% (Report 20% Presentation 10%)