

Statistics MT353/PS188/SC200
Spring 2012
Prof. Dan Chambers
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202 Carney Hall 6:30-9:00

This course is primarily an introduction to inferential statistics. Topics to be covered include descriptive statistics, elementary probability, the binomial and normal distributions, estimation, and hypothesis testing.

Text: The required text is Elementary Statistics, 5th edition, A Step by Step Approach, a Brief version, by Allan Bluman. (This includes a CD-ROM, which may or may not appear in the title; the CD-ROM won't be needed for class.) There is a bound paper version of this, ISBN-13 9780077359423 and also a looseleaf version of the same material at a cheaper price, ISBN-13 9780077450830. Either may be used.

The course is based on Chapters 1 through 9. Specific topics are: introduction, frequency tables, frequency histograms, means and other measures of central tendency, variances, z-scores, an introduction to probability (sample spaces, frequency functions, independence, conditional probability, addition and multiplication rules), random variables, binomial distribution, mean, variance, and standard deviation of a probability distribution, the normal distribution, central limit theorem, normal approximation to the binomial, point and confidence intervals for means (small and large sample size cases) and proportions, and one and two sample hypothesis tests for means and proportions.

Calculators: The course requires the use of a calculator for homework and examinations. Any calculator that has a square root key and a power key is sufficient for the course.

Examinations and Course Grading: There will be two quizzes, a midterm, and a comprehensive final. Each quiz accounts for 1/6 of the course average, the midterm for 1/3, and the final for the remaining 1/3 of the course average. Final (letter) grades are then assigned on the basis of the class distribution of averages, with minor adjustments made as appropriate.

Homework: Problems will be assigned at each class meeting. Students are expected to work out solutions as best they can for the assigned problems and then be prepared to discuss them at the next class. While no written work will be collected, students should keep a running notebook of their homework solutions for later study, as examination questions will usually draw directly from the homework experience.

You have a BC email address. Any messages I send to the class will go through this address. If you do not regularly check it, you should forward your email to your preferred address; use Agora to do so.

Office and Help: My office is located in Carney, room 365 (552-3769). I maintain regular office hours (for general help and questions) before class, beginning about 5:45 p.m.

Other resources: the Connors Family Learning Center (on the second floor of O'Neill Library) has free one-on-one tutoring in statistics available. Sessions are by appointment at 617-552-0611.

Website: www2.bc.edu/daniel-chambers and follow the link to MT353.