

Introductory Statistics, Math 235

11:0–12:15, MW, in Rm309, Hagg Hall, Winter, 2006.

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Course Description: No prerequisite is required. Math 235 is the first course of statistics. It mainly introduces basic statistical concepts and methods and shows how they enhance critical thinking and reasoning. Statistical reasoning will be emphasized. At the conclusion of the course, the student should be familiar with concepts of sampling distribution, point estimation, confidence interval, statistical inference and simple regression.

Brief Outline: Population and sample [1 week]; Frequency table, histogram and stem-and-leaf plot [1 weeks]; mean, median and mode, variance and standard deviation, quartiles and interquartile range, Box and Whisker plot [1.5 week]; Basic probability [1 weeks]; Discrete random variable [1.5 weeks]; Continuous random variable [1 week]; Sampling distribution of sample mean [1 weeks]; Estimation and confidence interval for the mean and proportion [1.5 weeks]; Hypothesis tests about the mean and proportion [1.5 weeks], Describing bivariate data, estimation and hypothesis testing for two populations [1.5 weeks]; selected topics in Chi-Square test, ANOVA, Simple linear regression [2 weeks].

Text: The text for the course is Mann's "Introductory Statistics", Fifth Edition. I plan to cover most of this book. Note that **the book is intended as a reference only and I may not follow the textbook closely**. I may emphasize certain topics more or less than the book does, or introduce a few additional topics not covered in the book. It is therefore very important that you attend lecture since the exams will be based on what I cover in lectures and on your homework assignments.

Website of this Class: <http://mendota.umkc.edu/teaching/m235.html>

for homeworks, practice exams and their solutions, and other related interesting websites.

Grading: There will be assignments worth a total of 15% of your grade, 4 to 6 random quizzes worth of 5%, two midterms in class [one in the fifth week and the other in the eleventh week usual] worth 25% each and a final [Tuesday, May 2, 1-3pm, in class] worth 30%. Note that the midterms are basically not comprehensive, but the final is comprehensive.

There will be roughly 9-12 assignments for the course [at least one every two weeks]. You are permitted to discuss homework problems, but you must write up the solutions independently. No credit will be given to assignments found to be substantially similar.

You are allowed a calculator, the yellow Formulae Sheet with Tables and two sides of $8.5'' \times 11''$ notes for the midterms and the final. Solutions for the exams and the final examination must be explained as well as the solutions to homeworks, and no credit will be given for an answer without the relevant justification and explanation.

There will be no makeup exams and finals.

Late assignments will be penalized by 10% and won't be accepted after one week of the due date.

How to Reach Me:

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Office Hours: 10:10-11:00pm, every day, at my office, or by appointment gladly