

**Syllabus**  
**Statistics 440.605.52**  
**Summer 2009**

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Office hours: By appointment only  
Course webpage: [http://www.mkecon.com/stats\\_sum09.htm](http://www.mkecon.com/stats_sum09.htm)

**I. Course objective:**

This course provides a survey of probability and statistical inference and is designed to provide the requisite theoretical and intuitive background for 440.606 Econometrics. This course is taught at a level that assumes comfort with the course content in 440.304 Mathematical Methods for Economists, including differentiation, integration, and optimization.

**II. Required readings:**

The required text for the course is Anderson, Sweeney, and Williams' Statistics for Business and Economics 10<sup>th</sup> edition (any edition will probably be fine though). I highly recommend purchasing Ross' A First Course in Probability (seventh edition). There are additional examples and practice problems that can help you prepare for the quizzes and final exam. Also, these texts will serve as a valuable reference source for you in your future economics courses.

Lectures notes and any additional readings will be posted on the course webpage, as will homework and answer keys.

**III. Course Requirements**

You will be given one hour to complete the quizzes during class time. These quizzes will be non-cumulative. The final exam will be given on the final day of class and will cover the entirety of the course.

Practice problems will be assigned for each unit. While they will not be graded, I strongly recommend that you complete them to help you prepare for the quizzes.

Grades will be determined as follows:

- 10% Participation
- 60% Quizzes (four at 15% each)
- 30% Final exam

**IV. Ethics Statement**

The strength of Johns Hopkins University depends on academic and personal integrity. In this course, you must be honest and truthful. Ethical violations include cheating on exams, plagiarism, reuse of assignments, improper use of the Internet and electronic devices, unauthorized collaboration, alteration of graded assignments, forgery and falsification, lying, facilitating academic dishonesty, and unfair competition.

Report any violations you witness to the instructor. You may consult the associate dean of students and/or the chairman of the Ethics Board beforehand. See the guide on "Academic Ethics for Undergraduates" and the Ethics Board web site for more information.

## V. Tentative Outline

- June 17 – Unit 1: Descriptive Statistics (Sweeney, et al. Ch 1-3)
- June 22 – Unit 2: Introduction to Probability Theory (Sweeney, et al. Ch 4)
- June 24 – Quiz #1  
Unit 3: Random Variables (Sweeney, et al. Ch 5)
- July 8 – Unit 4: Univariate Probability Distributions (Sweeney, et al. Ch 5-6)
- July 13 – Unit 5: Sampling Distributions and the Central Limit Theorem (Sweeney, et al. Ch 7)
- July 15 – Quiz #2  
Unit 6: Confidence Intervals and Hypothesis Testing (Sweeney, et al. Ch 8-9)
- July 22 – Unit 6: Confidence Intervals and Hypothesis Testing (cont.)
- July 27 – Unit 7: Bivariate Probability Distributions
- July 29 – Quiz #3  
Unit 8: Hypothesis Testing with Two Population Means (Sweeney, et al. Ch 10)
- Aug 5 – Unit 9: Conditional Distributions
- Aug 10 – Unit 10: Topics in Estimation
- Aug 12 – Quiz #4  
Unit 10: Topics in Estimation (cont.)
- Aug 17 – Review
- Aug 19 – Final Exam