



B9323 Introduction to Econometrics and Statistical Inference

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Office:

Office Hours:

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Course Description: This course serves as an introductory course to econometrics and statistical inference at the graduate level. The course covers basic concepts of mathematical statistics, including estimation methods and statistical inference. The intent is to provide the foundations for data analysis and applied empirical work.

Grading: There will be four homework assignments, a course project, and a final exam. The homework will include problems related to concepts covered in the course and data analysis exercises. The final will be an open-book 24-hour take-home exam. The grade will be based on a weighted average of the homework (40%), project (20%), and final (40%).

Recommended Texts: The lecture notes are the primary source of information. There is no required textbook for this course. There are three recommended texts:

1. John Rice, "Mathematical Statistics and Data Analysis", 3rd ed., Brooks/Cole
2. George Casella and Roger Berger "Statistical Inference", 2nd ed., Brooks/Cole
3. Jeffrey Wooldridge, "Introductory Econometrics", 6th ed., Cambridge University Press

Session topics:

1. Sampling and Estimation
2. Asymptotics and Confidence Interval
3. Hypothesis Testing
4. Introduction to Causal Inference
5. Linear Regression 1

6. Linear Regression 2
7. Omitted Variable Bias and Instrumental Variable
8. Maximum Likelihood Estimation 1
9. Maximum Likelihood Estimation 2
10. Likelihood ratio test