

UNIVERSITY OF ILLINOIS
Department of Economics

Course: ECON 503 (MSPE), Spring 2025

January 21, 2025

Instructor: Anil K. Bera
Office Hours: 12:30-1:30 pm TR

Class Hours: 9:30-10:50 am TR
11:00-12:20 pm TR
Classroom: 123 DKH

TA: Jay Rafi (M1) & Lovepreet Singh (M2)

TA Discussion Hours: 9:30-10:50 am F (M1)
11:00-12:20 am F (M2)

TA Office Hours (M1): 2:00 – 3:00 pm MW; 4:00 – 5:00 pm TR

TA Office Hours (M2): 11:00 am – 12:00 pm MW; 3:00 – 4:00 pm TR



This is an introductory course in Econometrics. ***I will be assuming that you have good statistics and Matrix Algebra background.*** We will start with some real economic problems, for example, in consumption analysis, production economics, education-wage relationship, and stock market behavior, and then we will look for some econometric techniques to solve them.

The emphasis of the course will be on the *econometric methodologies* that we can apply. We will cover the following topics: 1–6 before the midterm and 7–12 after the midterm.

1. Introduction: Art of Econometric Modeling
 2. Simple Regression Analysis
 3. Ordinary Least Squares (OLS) and Maximum Likelihood (ML) Estimation Methods
 4. Hypothesis Testing with the Simple Regression Model
 5. Forecasting with the Simple Regression Model
 6. Matrix Algebra
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7. Multiple Regression Analysis
8. Hypothesis Testing with the Multiple Regression Model
9. Nonnormal Disturbances
10. Heteroskedasticity
11. Autocorrelation and Time Series Analysis
12. Spatial Data Analysis

Textbook:

Introduction to Econometrics, by James H. Stock and Mark W. Watson, 2nd Edition, 2007, Pearson Addison Wesley.

I will not, however, follow this book closely. All the Lecture Notes along with past years' Questions & Answers will be uploaded on UIUC (University of Illinois at Urbana Champaign) canvas. As you will notice, the subject matter is dry and mechanical. We will try to make things livelier by analyzing some interesting data sets and contemporary real-world problems.

The evaluation of the course will be based on two exams: a midterm (20%) and a final (20%), and an applied project (50%): (15%) for proposal due on **March 14th** and (35%) for the term paper, on the last day of the class.

A surprise: there are still 10 marks left. That will be awarded to you at the discretion of your TA.

More surprise! You can get a straight A in the course by active class participation. All you will need is a high class participation score (CPS). You can get scores by answering questions in the class or by asking questions. You need to keep a full document of the questions and answers along with the dates and submit that at the end of the semester. I will discuss more about CPS in class.