Part A: John C. Chao
Part B: Ingmar R. Prucha

Lecture: Part A, TBD, Part B, Tu 5:00-7:30pm (TYD 0102)
If needed, some lectures may be shifted to Th 5:00-7:30pm

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ECONOMETRICS IV
Microeconometrics

COURSE OVERVIEW

Part A of the course will cover the following topics
- Binary Response Models
- Multinomial Response Models
- Censored and Truncated Regression Models
- Sample Selection Models
- Series Estimation
- Machine Learning
- Semiparametric Inference using Series and ML

Part B of the course will cover the following topics
- Quantile Regression
- Non-parametric and Semi-parametric Estimation Methods
- Spatial/Cross Sectional Interaction Models
- Dynamic Panel Data Models
- Weak Instruments
- Cluster and Stratified Sampling (if not covered elsewhere)
- Bootstrap and Jack Knife methods (if time permits)
COURSE AIMS

The course is oriented to provide students with a rigorous and broad knowledge of econometric methods especially important for conducting empirical research in micro-economics. The course is not geared towards training econometric theorists, although this course would be necessary training for such a specialization. In particular, the aim of the course is to provide students with the necessary tools to (i) read intelligently all empirical research (with a proper understanding of the underlying methodology of inference), and (ii) to conduct empirical research suitable for publication in any economics or econometrics journal. The course builds on Econometrics I and II, and complements Empirical Microeconomics.

ASSUMED REQUIREMENTS

Students are assumed to have knowledge of the material covered in Econometrics I and II.

PRINCIPAL TEXTS

Cameron, A.C., and P.K. Trivedi, Microeconometrics, Methods and Applications, Cambridge, 2005.

SUPPLEMENTARY TEXTS


GRADING POLICY

The final grade in Econ 722 will be based on the performance in Part A and B of the course, each component getting equal weights:

Part A: Exam 50.0%*
Part B: Exam 50.0%*

* No makeup exams will be given except in cases of illness (confirmed by a doctor’s certificate), religious observance, participation in University activities at the request of the University authorities, or compelling circumstances beyond the student's control. If at all possible, the student must inform me (or the Economics Department) of her/his situation before the exam.
In case the University is closed during (part of) the official scheduled time period for the final exam, the exam will be rescheduled according to the instructions that will be given by the University in that eventuality.

**MIDTERM EXAM:** open book, date to be determined

**FINAL EXAM:** Tuesday, May 19, 2020, 4-6:00pm

**Academic Integrity**

The student-administered University Honor Code and Honor Pledge (shc.umd.edu/code.html) prohibits students from cheating on exams, plagiarizing papers, submitting the same paper for credit in two courses without authorization, buying papers, submitting fraudulent documents and forging signatures. On every examination students must write by hand and sign the following pledge,

“I pledge on my honor that I have not given or received any unauthorized assistance on this examination or assignment.”

Compliance with the code is administered by the Student Honor Council, which strives to promote a community of trust on the College Park campus.

**Copyright Protection for Class Materials**

The lecture class and all other course materials that exist in a tangible medium, such as written or recorded lectures, Power Point presentations, handouts and tests, are copyright protected. Students may not copy and distribute such materials except for personal use and with the instructor’s permission.

**Attendance**

By signing up for this class you agree to exam formats, course requirements and timing of exams and due dates of work to be handed in. Attendance in all lectures is expected.

**Students with Disabilities**

UMD guarantees appropriate accommodations for students with disabilities. If you require accommodations, please contact me as soon as possible. If you need further clarification, the link to DSS is: [http://faculty.umd.edu/teach/specialneeds.html](http://faculty.umd.edu/teach/specialneeds.html)

**COURSE EVALUATIONS**

Students are encouraged to submit course evaluations through CourseEvalUM ([www.courseevalum.umd.edu](http://www.courseevalum.umd.edu)).
READING LIST FOR PART A (*required)

**Binary Choice Models**
*Wooldridge Chapter 15
Cameron and Trivedi Chapter 14


**Multinomial Response Models**
*Wooldridge Chapter 16
Cameron and Trivedi Chapter 15


Censored and Truncated Regression Models
*Wooldridge Chapter 17

Sample Selection Models
*Wooldridge Chapter 19

Series and Sieve Estimation, Semiparametric Inference, Nonlinear Instrumental Variables


**Machine Learning Algorithms**

READING LIST FOR PART B

Nonparametric and Semiparametric Estimation

Prucha, I.R., Handout on Nonparametric and Semiparametric Estimation

*Below is a list of some texts and review articles. References to research articles are given in the handout.*

Cameron, A.C., and P.K. Trivedi, 2005, Microeconometrics, Methods and Applications, Cambridge University Press, Cambridge, Ch. 9.


Spatial/Cross Sectional Interaction Models

Prucha, I.R., Handout on Estimation of Spatial Models

Below is a list of some texts and review articles. References to research articles are given in the handout.


Below are some recent articles that explicitly connect spatial and social interaction models


Quantile Regression

Prucha, I.R., Handout on LAD and Quantile Regression

Below is a list of some texts and review articles. References to research articles are given in the handout.


A more extended treatment of the subject is now also available:


**Weak Instruments**

Prucha, I.R., Handout on Weak Instruments

_Below is a list of some review articles. References to research articles are given in the handout._


**Dynamic Panel Data Models**

Prucha, I.R., Handout on Panel Data Models

_Below is a list of some texts and reviews. References to research articles are given in the handout._

Arellano, M., 2003, Panel Data Econometrics, Oxford University Press, Part III.


