

**Econ 273B**  
Advanced Econometrics  
Spring 2005-6

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OH: Th 3-5 or by appt.

This is a graduate level course in econometrics. The first part of the course is devoted to basic nonparametric methods and studying their large sample properties. The second part of the course develops asymptotic theory for parametric and semiparametric estimators and the theory will be illustrated with several important examples. The latter half of the course will cover a number of microeconomic models as well as the Bootstrap and other resampling methods.

Evaluation: There will be (approximately) three problem sets and a take-home exam. You are also expected to do a class presentation of a research paper or to do a (small) paper on a specific topic you saw in class.

Some of the readings below are principal sources for the course while others are background material. We will not cover all the material in the reading list at the same depth. There are no required textbooks for the course although the following will be useful references.

1. Asymptotic Statistics, van der Vaart (1998)
2. Semiparametric Methods in Econometrics, Horowitz (1998)
3. Nonparametric Econometrics, Pagan and Ullah (1999)
4. Approximation theorems of Mathematical Statistics, Serfling (2001)
5. Probability and Measure, Billingsley (1995)
6. Stochastic Limit Theory, Davidson (1994)
7. Advanced Econometrics, Amemiya (1985)
8. Asymptotic Theory for Econometricians, White (2000)
9. Econometrics of Cross-Section and Panel Data, Wooldridge (2001)

## 1. **Nonparametrics**

Fan and Gijbels (1996)

Hardle (1992)

Hardle and Linton (1994)

Jones and Wand (1995)

Pagan and Ullah (1999)

Silverman (1986)

Stone (1977), Stone (1980), Stone (1982)

Ichimura and Todd (2004)

## 2. **Large Sample Distribution Theory I**

Newey and McFadden (1994)

Pakes and Pollard (1989)

Barndorff-Nielsen and Cox (1989)

van der Vaart (1998) (Ch. 5)

## 3. **Large Sample Distribution Theory II**

Newey and McFadden (1994) (Ch. 36 Sec 8)

Ichimura and Todd (2004)

Ichimura and S.Lee (2005)

Shen (1997)

Chen (2004)

Chen, Linton, and Keilegom (2003)

Chen and Shen (1998)

Newey (1994)

Powell (1994)

Serfling (2001)

Andrews (1987), Andrews (1992), Andrews (1994a), Andrews (1995)

Robinson (1988), Robinson (1987)

Powell, Stock, and Stoker (1989)

Han (1987)

Ichimura (1993)

#### 4. **Basic Empirical Process Theory**

Andrews (1994b)

Dudley (1999)

Pollard (1990)

Pollard (1984)

van de Geer (2000)

van der Vaart and Wellner (1996)

van der Vaart (1998)

#### 5. **Binary Response Models**

Cosslett (1983), Cosslett (1987)

Horowitz (1998)

Horowitz (1992)

Kim and Pollard (1990)

Klein and Spady (1993)

Manski (1985), Manski (1988)

Matzkin (1992)

Sherman (1993)

Blundell and Powell (2003)

#### 6. **The Selection Problem**

Amemiya (1985) (Chapter 10)

Maddala (1983)

Heckman (1979)

Heckman and Honore (1990)

Ahn and Powell (1993)

Imbens and Angrist (1994)

## 7. **Censored Models**

Buchinsky and Hahn (1998)  
Buckley and James (1979)  
Powell (1984)  
Manski and Tamer (2002)  
Honore and Powell (1994)  
Hong and Tamer (2003)  
Powell (1986a), Powell (1986b)

## 8. **Panel Data**

Chamberlain (1984)  
Arellano and Honore (2001)  
Hausman and Taylor (1981)  
Honore (1992)  
Hsiao (1986)  
Kyriazidou (1997)  
Wooldridge (2001)

## 9. **Bootstrap Methods**

Efron and Tibshirani (1994)  
Horowitz (2001)  
Shao and Tu (1996)  
Hall and Hall (1992)  
Politis, Romano, and Wolf (1999)  
Abrevaya and Huang (2005)

## 10. **Measurement Error**

Klepper and Leamer (1984)  
Bound, Brown, and Mathiowetz (2000)  
Hausman, Newey, Ichimura, and Powell (1991)  
Horowitz and Manski (1995)

Chen, Hong, and Tamer (2002)

Taupin (2001)

## 11. Social Effects

Brock and Durlauf (2003)

Manski (1993)

Manski (2003)

Ciliberto and Tamer (2004)

Tamer (2001)

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