

Econ 710
Economic Statistics and Econometrics II
Spring 2012

Course Time: Tuesdays and Thursdays, 11:00 – 12:15. Psychology 103
Office Hours: Wednesdays, 1:30 – 3:30, or by appointment. 6438 Social Science
Webpage: <http://www.ssc.wisc.edu/~bhansen/710/>

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TA: Jay Lee slee279@wisc.edu

This course is designed for first-year Economics Ph.D. students. The basic methods of modern econometric methods and theory are covered. The intention is that the material will provide a foundation for applied research in economics

The course prerequisites are Econ 703 and 709, or equivalents.
Familiarity with probability, statistics, and matrix algebra is assumed.

Class assignments will be passed out approximately every week. These assignments will include both problem solving and computer tasks. The computer exercises will involve programming in Matlab programming language. The assignments will be graded by the teaching assistant, and will be reviewed in the discussion sections. Questions regarding computers and software should be directed to the TA

There will be two exams, a mid-term and a final. The grading for the course will be as follows: Assignments: 20%. Midterm: 30%. Final: 50%.

The Mid-Term exam will be during class on Thursday, March 8.
The Final exam will be Tuesday, May 15 from 9am to noon.
The exams are open-book and open-note.

A draft textbook is posted on the webpage. This is a manuscript in progress, and is periodically rewritten.

To supplement the lecture notes, I recommended *Econometrics* by Fumio Hayashi, *Econometric Analysis* by William H. Greene, and *Econometric Analysis of Cross Section and Panel Data* by Jeffrey Wooldridge. Wooldridge and Hayashi are closer in style and substance to the course. Greene is more encyclopedic and is preferred by some students.

A well-written supplementary monograph is *Mostly Harmless Econometrics* by Joshua Angrish and Jorn-Steffen Pischke

On the next page, I have listed some major textbooks and resources in econometrics. They may be useful as references for further study or for applied projects.

Alternative textbooks:

Arthur S. Goldberger, *A Course in Econometrics* (1991)
Paul A. Ruud, *An Introduction to Classical Econometric Theory* (2000)
James Davidson, *Econometric Theory* (2000)
Russell Davidson and James G. MacKinnon, *Estimation and Inference in Econometrics* (1993)

Advanced Econometrics:

Handbook of Econometrics, Volumes I-V.
Takeshi Amemiya, *Advanced Econometrics* (1985).
James Davidson, *Stochastic Limit Theory* (1994).

The Bootstrap:

Peter Hall, *The Bootstrap and Edgeworth Expansion* (1992).
Bradley Efron and Robert J. Tibshirani, *An Introduction to the Bootstrap* (1993).
A.C. Davison and D.V. Hinkley, *Bootstrap Methods and their Application* (1997).

Panel Data

Badi Baltagi, *Econometric Analysis of Panel Data*
Laszlo Matyas and Patrick Sevestre, eds., *The Econometrics of Panel Data* (1996).
Jeffrey Wooldridge, *Econometric Analysis of Cross Section and Panel Data* (2002)
Cheng Hsiao, *Analysis of Panel Data*, 2nd edition (2003).
Manuel Arellano *Panel Data Econometrics* (2003)

Time Series

Clive W.J. Granger and Timo Terasvirta, *Modelling Nonlinear Economic Relationships* (1993).
James D. Hamilton, *Time Series Analysis* (1994).
Soren Johansen, *Likelihood-Based Inference in Cointegrated Vector Autoregressive Models* (1995).
Philip Hans Franses and Dick van Dijk, *Non-Linear Time Series Models in Empirical Finance* (2000).

NonParametrics

Wolfgang Hardle, *Applied Nonparametric Regression* (1990).
Jianiang Fan and Irene Gijbels *Local Polynomial Modelling and Its Applications* (1996)
Adrian Pagan and Aman Ullah, *Nonparametric Econometrics* (1999).
Jianqing Fan and Qiwei Yao *Nonlinear Time Series* (2003)
Adonis Yatchew *Semiparametric Regression for the Applied Econometrician* (2003)
Qi Li and Jeffrey Racine *Nonparametric Econometrics* (2007)

Limited Dependent Variables

G.S. Maddala, *Limited-Dependent and Qualitative Variables in Econometrics* (1983).
Christian Gourieroux, *Econometrics of Qualitative Dependent Variables* (1991).
Colin Cameron and Pravin K. Trivedi, *Regression Analysis of Count Data* (1998).
Colin Cameron and Pravin K. Trivedi, *Microeconometrics* (2005).

Grievance Procedure

The Department of Economics has developed a grievance procedure through which you may register comments or complaints about a course, an instructor, or a teaching assistant. Before utilizing the formal steps of this procedure, we ask that you utilize two other means of addressing your comments: our regular course evaluations, anonymous and confidential commentaries solicited at the end of each semester in every Economics class, and also by direct communication with the instructor or teaching assistant involved. The formal grievance procedure is designed for situations where neither of these channels is appropriate and where one or both of these have been tried.

If you wish to file a grievance, you should go to Room 7238 Social Science and request a Course Comment Sheet. When completing the comment sheet, you will need to provide a detailed statement that describes what aspects of the course you find unsatisfactory. You will need to sign the sheet and provide your student identification number, your addresses, and a phone where you can be reached. The Department will investigate comments fully and respond in writing to complaints.

Your name, address, phone number, and student ID number will not be revealed to the instructor or teaching assistant involved and will be treated as confidential. The Department needs this information because it may become necessary for a commenting student to have a meeting with the department chair or a nominee to gather additional information. Your street and e-mail addresses are necessary for providing a written response.

Misconduct Statement

Academic integrity is critical to maintaining fair and knowledge based learning at UW Madison. Academic dishonesty is a serious violation; it undermines the bonds of trust and honesty between members of our academic community, degrades the value of your degree and defrauds those who may eventually depend upon your knowledge and integrity.

Examples of academic misconduct include but are not limited to: cheating on an examination (copying from another student's paper, referring to materials on the exam other than those explicitly permitted, continuing to work on an exam after the time has expired, turning in an exam for re-grading after making changes to the exam), copying the homework of someone else, submitting for credit work done by someone else, stealing examinations or course materials, tampering with the grade records or with another student's work, or knowingly and intentionally assisting another student in any of the above.

The Dept. of Economics will deal with these offenses harshly following UWS14 procedures (<http://students.wisc.edu/saja/misconduct/UWS14.html>):

1. The penalty for misconduct in most cases will be removal from the course and a failing grade.
2. The department will inform the Dean of Students as required and additional sanctions may be applied.
3. The department will keep an internal record of misconduct incidents. This information will be made available to teaching faculty writing recommendation letters and to admission offices of the School of Business and Engineering.

If you think you see incidents of misconduct, you should tell your instructor about them, in which case they will take appropriate action and protect your identity. You could also choose to contact our administrator (Mary Beth Ellis: mellis@ssc.wisc.edu) and your identity will be kept confidential.