

Chinese University of Hong Kong, Fall 2014
ECON5121A
Econometric Theory and Application

Instructor:

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Lecture Hours and Location: Wednesdays 2:30 - 5:15pm, AIT G02

This course is an entry-level graduate econometrics course, but I presume your good knowledge of econometrics and statistics at the undergraduate level, as well as probability theory, such as are taught in ECON2121 and ECON3121. Both econometric theory and its application will be emphasized. Lecture notes will be provided on CU eLearning System.

Topics (tentative):

- 1) Classical Multiple Regression model
- 2) Inference and hypothesis testing
- 3) Finite sample properties of OLS and Asymptotics
- 4) Multicollinearity
- 5) Autocorrelation, Heteroskedasticity and Generalized Least Squares
- 6) Endogeneity and Instrumental Variables
- 7) Generalized Method of Moments
- 8) Panel data analysis
- 9) Average Treatment Effect
- 10) Binary Choice Model
- 11) Sample Selection Model

References:

Econometric Analysis, Greene, Prentice-Hall, 2008
Econometric Theory and Methods, Davidson and MacKinnon, Oxford, 2004
Econometrics, Hayashi, Princeton, 2000
Microeconometrics: Methods and Applications, Cameron and Trivedi, Cambridge, 2005
Econometric Analysis of Cross Section and Panel Data, Wooldridge, MIT, 2002
Analysis of Panel Data, Hsiao, Cambridge, 2003
Mostly Harmless Econometrics, Angrist and Pischke, Princeton, 2008
Limited-Dependent and Qualitative Variables in Econometrics, Maddala, 1986

For undergraduate-level knowledge:

Introductory Econometrics, Wooldridge, South-Western, 2009
Introduction to Econometrics (1st Ed), Stock and Watson, Addison Wesley, 2006

Statistical programming:

MATLAB guide: <http://www.mathworks.com/help/techdoc/index.html>
STATA and SAS guide: <http://www.ats.ucla.edu/stat/>

For further theoretical knowledge:

Statistical Inference, Casella and Berger, Cengage Learning , 2001
Matrix Algebra from a Statistician's Perspective, Harville, Springer, 2008
An Introduction to Classical Econometric Theory, Rudd, Oxford University Press, 2000

Evaluations will be based on assignments/quizzes (40%) and a final examination (60%). The quizzes are *tentatively* scheduled on Oct 8 and Oct 29. You must be aware of that the classes with quizzes can be dismissed around 30 minutes late. The final examination will be on Wed, November 26th. Always bring your calculator.

Honesty in Academic Work

Please visit the following website for details of university policy on Honesty in Academic Work: <http://www.cuhk.edu.hk/policy/academichonesty/>. Every assignment must be accompanied by a signed declaration of originality.