Chinese University of Hong Kong, Fall 2018

ECON5121A: Econometric Theory and Applications

Instructor:

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Lecture Hours and Venue:

Starting from September 7, every Friday 8:30 - 11:15pm, ELB 205

Topics (tentative):

This course is an entry-level graduate econometrics course. Knowledge of econometrics and statistics at the undergraduate level is prerequisite.

- Review of probability theory
- Conditional expectation and linear projection
- Least squares estimator
- Basic asymptotic theory
- Hypothesis testing
- Panel data model
- Endogeneity and instruments
- Generalized method of moments
- Nonparametric methods

Numerical examples will be demonstrated in R.

Textbooks:

- Bruce Hansen (2018): Econometrics (http://www.ssc.wisc.edu/~bhansen/econometrics/) *Downloadable for free*

Lecture Notes:

- https://github.com/zhentaoshi/Econ5121A. The code in the IPython notebooks can be executed either locally, or online at https://notebooks.azure.com/

References:

For comprehensive coverage

- Hayashi (2000): Econometrics

For undergraduate-level knowledge

- Stock and Watson (2014): Introduction to Econometrics (3rd Ed.)

For mathematical statistics foundation

- Casella and Berger (2002): Statistical Inference (2nd Ed.)

For R and more

- Kleiber and Zeileis (2008): Applied Econometrics with R
- James, Witten, Hastie and Tibshirani (2013): An Introduction to Statistical Learning with Applications in R (http://www-bcf.usc.edu/~gareth/ISL/) *Downloadable for free*

Evaluations:

- midterm (50%): **Oct 19**
- final (50%): TBD

Academic Honesty:

Attention is drawn to University policy and regulations on honesty in academic work, and to the disciplinary guidelines and procedures applicable to breaches of such policy and regulations. Details may be found at http://www.cuhk.edu.hk/policy/academichonesty/.