# The Chinese University of Hong Kong, Fall 2020

# ECON5121A: Econometric Theory and Applications

## Instructor:

### Shi, Zhentao

Office hours: Fridays 4-5 pm, or by appointment

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**Teaching Assistant:**

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Office hours:

Office:

Email:

## Lecture Hours and Venue:

Friday 8:30—11:15 am

Dates: September 11, 18, 25;

October 9, 16, 23, 30;

November 6, 13, 20, 27;

Dec 4

**Teaching Mode:**

### Teaching with be conducted online until University’s further notice. If taught face-to-face, all classes will be live streamed simultaneously and students are free to choose attending classes in person or online.

**Topics:**

### This course is an entry-level graduate econometrics course. Knowledge of multivariate calculus, linear algebra, statistics and econometrics at the undergraduate level is prerequisite.

### (Week 1, 2) Conditional expectation and linear projection

### (Week 3, 4) Least squares estimator

### (Week 5, 6) Basic asymptotic theory

### (Week 7, 8) Hypothesis testing

### (Week 9) Panel data models

### (Week 10, 11) Endogeneity and instruments

### (Week 12) Generalized method of moments

### **Textbooks:**

### Hansen (2020): Introduction to Econometrics (<https://www.ssc.wisc.edu/~bhansen/probability/>) *Downloadable for free*

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### **Lecture Notes:**

### <https://github.com/zhentaoshi/Econ5121A>

**Evaluations:**

### Attendance (15%): open webcam in each class

### Assignment (35%): hand in one week after assignment

### Final (50%): open-book, but no electric devices are allowed

**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/>.