



北京大学  
汇丰商学院

Peking University HSBC Business School

# ECON532

## Applied Econometrics

### Module 1, 2017-2018

#### Course Information

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Office Hour: Wednesday 15:30-17:30

**Teaching Assistant: T.B.D.**

Phone: T.B.D

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**Classes:**

Lectures: Monday & Thursday 8:30-10:20 (F1); 10:30-12:20 (F2); or 15:30-17:20 (F3)

Venue: PHBS Building, Room T.B.D.

**Course Website:**

<https://sites.google.com/site/hscelil/>

## 1. Course Description

### 1.1 Context

**Course overview:**

This course mainly introduces the classical parametric models and their applications in economics, management, and finance. This course starts from the classical linear regression model and extend the model's assumptions one by one so that more general models and methods could be introduced in an orderly way. Each model is both motivated and illustrated with its application, and normally accompanied by corresponding data set. Special emphasis is given on analyzing the data set by using suitable econometric software ( i.e. Stata, R, EViews, Microfit, MatLab, C/C++, SAS, MS Office) and interpreting the output in order to understand, replicate, and extend a previous scientific research in respective fields.

*Note:* You are free to use your own choice of statistical software. However, we will mainly use Stata to do in class illustrations.

**Prerequisites:**

You are required to have completed the prerequisite courses, as specified by PKU HSBC Business School. It is assumed that students have taken basic courses in mathematics and statistics before taking this course, and they are familiar with concepts of classical multiple linear regression models.

## 1.2 Textbooks and Reading Materials

### Textbook

Jeffrey M. Wooldridge, "Introductory Econometrics: A Modern Approach", 4th edition, Tsinghua University Press

### Required Readings

William H. Greene (2012), Econometric Analysis, 7th Edition

Peter Kennedy (2008), A Guide to Econometrics, 6th Edition

Note: Supplementary materials will be provided on course website. The list of papers in various fields of finance & economics will also be provided on course website in order to provide real world applications of the material covered in class.

## 2. Learning Outcomes

### 2.1 Intended Learning Outcomes

Learning Goals	Objectives	Assessment
1. Our graduates will be effective communicators.	1.1. Our students will produce quality business and research-oriented documents.	√
	1.2. Students are able to professionally present their ideas and also logically explain and defend their argument.	√
2. Our graduates will be skilled in team work and leadership.	2.1. Students will be able to lead and participate in group for projects, discussion, and presentation.	√
	2.2. Students will be able to apply leadership theories and related skills.	
3. Our graduates will be trained in ethics.	3.1. In a case setting, students will use appropriate techniques to analyze business problems and identify the ethical aspects, provide a solution and defend it.	
	3.2. Our students will practice ethics in the duration of the program.	
4. Our graduates will have a global perspective.	4.1. Students will have an international exposure.	
5. Our graduates will be skilled in problem-solving and critical thinking.	5.1. Our students will have a good understanding of fundamental theories in their fields.	√
	5.2. Our students will be prepared to face problems in various business settings and find solutions.	
	5.3. Our students will demonstrate competency in critical thinking.	√

### 2.2 Course specific objectives

This course teaches students how to apply theoretical aspects of econometrics to real data in the context of corresponding fields of economics, i.e. corporate finance. By the end of course students will learn how to read a scientific article, replicate and extend the documented results

themselves. The course also intends to increase student's programming experiences.

### **2.3 Assessment/Grading Details**

<b>Assessment task</b>	<b>Weighting</b>
Attendance	10%
Homework assignment	20%
Project proposal	20%
Final project: Presentation, write-up, and peer group evaluation	50%
Total	100%

The final evaluation for your performance in this course will be based on an attendance, individual homework assignments, and a group project, which will consist of both a presentation and a write-up. The grading will be based on:

- a) *Attendance*: Attendance is expected in this class. There will be a sign-up sheet distributed among the class participants when necessary. If a student provides an excuse prior to the class time, upon approval of the instructor of class student can be excused for missing a class. Furthermore, student who misses class beyond reasonable frequency will automatically loss the class participation grade.
- b) *Individual homework assignments*: There will be 2 to 3 homework assignments, which will consist 20% of students' grade. Necessary information and tools will be provided to student. Students can work as a group but have to turn in their own work before the respective deadline.
- c) *Proposal*: Proposal should contain a motivation, goal, empirical methodology, and contribution of the empirical paper that students intend to replicate and extend as a group during the module. At the beginning of module each student will assigned to a group which consist of 4 to 6 people (depending on class size), and they will work together towards finishing their own project. *Tentative submission deadline for proposal is T.B.D.*
- d) *Presentations*: Presentation should contain a summary of paper that a group of students pick to replicate, replication strategy and results, extension of a paper that a group of students intends to do, corresponding results on their extensions, if any. Presentations can be done by different group members as long as they do not go over the allowed time. However, all the group members should be able to answer any questions regarding the content of original paper, and its' extension.
- e) *Write-up*: Project write-up will be due on T.B.D. date. More instructions and guideline will be provided during the course.
- f) *Peer group evaluations*: Student will grade input of fellow group members and themselves on the following criteria: punctuality, contribution, quality, and collaboration. These evaluations will be used to determine the final grade of a student. More instructions and guidelines will be provided during the course.

### **2.4 Academic Honesty and Plagiarism**

It is important for a student's effort and credit to be recognized through class assessment. Credits earned for a student work due to efforts done by others are clearly unfair. Deliberate dishonesty is considered academic misconducts, which include plagiarism; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work;

taking, acquiring, or using test materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honors, awards, or professional endorsement; or altering, forging, or misusing a University academic record; or fabricating or falsifying of data, research procedures, or data analysis.

All assessments are subject to academic misconduct check. Misconduct check may include reproducing the assessment, providing a copy to another member of faculty, and/or communicate a copy of this assignment to the PHBS Discipline Committee. A suspected plagiarized document/assignment submitted to a plagiarism checking service may be kept in its database for future reference purpose.

Where violation is suspected, penalties will be implemented. The penalties for academic misconduct may include: deduction of honour points, a mark of zero on the assessment, a fail grade for the whole course, and reference of the matter to the Peking University Registrar.

For more information of plagiarism, please refer to *PHBS Student Handbook*.

### 3. Topics, Teaching and Assessment Schedule

Week	Topics
1	Overview of the Course; How to read a scientific article;
1,2	Multiple regression models (MLR); Further issues on multiple regression models
2,3	Dummy variables and linear probability models;
3,4	Heteroskedasticity; Other assumption violations of classical MLR
4,5	Introduction: Time series analysis; Introduction: Panel data analysis
6,7	Issues in time series analysis; Issues in panel data analysis
7,8	Illustrated empirical papers
8,9	Student group presentations

### 4. Miscellaneous

#### *Accommodations for disability:*

Students with disabilities and needs assistance are required to get in touch with the instructor as soon as possible and provide the documentary evidence if it is necessary. Instructor will be happy to accommodate students' needs.