



北京大學
汇丰商学院

Peking University HSBC Business School

Course Code

**Course Name: Applied Econometrics
Module 1, Academic Year 2019-2020**

Course Information

Instructor: Mohammad Ali Moradi

Office: PHBS Building, Room 628

Phone:

Email: moradi@phbs.pku.edu.cn

Office Hour: Monday & Thursday, 2:00-4:00 PM or by appointment

Teaching Assistant:

Phone:

Email:

Classes:

Lectures: Monday & Thursday 10:30-12:20

Venue: PHBS Building, Room 225

Course Website:

To be announced later.

Course Description

1.1 Context

Course overview:

This course provides introduction to the participant about the subject of Applied Econometrics and will largely focus on the formulating problems, modelling, collecting and analyzing data, estimating relationships, testing hypotheses and understanding statistical inference related to linear regression models and their applications to the student's fields. It aims that, at the end of the course, the participants should fearlessly be able to engage in empirical research by using econometric analysis. The course is useful to understand modelling and econometric estimation techniques particularly through theoretical explanations and demonstrations using computer software packages. This course enables students to transform data into knowledge to make better decisions and policies. We will introduce the topics and then use in-class labs so students learn effectively by doing. To complement the in-class learning, we will also have problem sets, group projects and final report.

Prerequisites:

The course presumes that students have taken basic courses in their fields and understand major theories of their specialization before taking this course.

1.2 Textbooks and Reading Materials

Lecture notes, assignments, cases and other useful information will be posted on the course web page.

1. Greene, W. H. (2012). *Econometric Analysis*. 7th Edition, Prentice Hall, New York.

Additional readings will be assigned accordingly.

1. Learning Outcomes

2.1 Intended Learning Outcomes

Learning Goals	Objectives	Assessment (YES with details or NO)
1. Our graduates will be effective communicators.	1.1. Our students will produce quality research-oriented documents.	Projects, examinations, class presentations
	1.2. Our students will be able to professionally present their ideas and also logically explain and defend their argument.	Projects, examinations, class presentations
2. Our graduates will understand the fundamental concepts of econometrics	2.1. Our students will be able to present their understanding of fundamental concepts of econometrics.	Projects, examinations, class presentations
	2.2 Our students will be able to explain the fundamental concepts of econometrics	
	2.3 Our students will be able to compare and contrast the fundamental concepts of econometrics.	
3. Our graduates will be skilled in team work.	3.1. Our students will be able to lead and participate in group for projects, discussion, and presentation.	Projects, examinations, class presentations
	3.2. Our students will be able to apply econometric techniques in their fields.	Projects, examinations, class presentations
4. Our graduates will be trained in ethics.	4.1. In a case setting, our students will use appropriate techniques to analyze business problems and identify the ethical aspects, provide a solution and defend it.	Projects, examinations, class presentations
	4.2. Our students will practice ethics in the duration of the program.	
5. Our graduates will have a global perspective.	5.1. Our students will have an international exposure.	Projects, examinations, class presentations
6. Our graduates will be skilled in critical thinking, formulating problems, collecting and analyzing data, estimating relationships and testing hypotheses and problem-solving.	6.1. Our students will have a good understanding of fundamental econometric techniques in their fields.	Projects, examinations, class presentations
	6.2. Our students will be prepared to face problems in various econometric settings: formulating problems, collecting and analyzing data, estimating relationships, testing hypotheses and problem-solving.	Projects, examinations, class presentations
	6.3. Our students will demonstrate competency in critical thinking.	Projects, examinations, class presentations
7. Our graduates will write a project and present in the class.	7.1. Our students will lead and participate in group for writing projects and discussion.	Assessed assignments, report and class presentations
	7.2. Our students will present research report to group.	
	7.3. Our students will be able to produce independently quality research-oriented	

2.2 Course specific objectives

1. Provides students solid econometric knowledge necessary to assess their academic research and empirical analysis.
2. Improves students' ability of formulating problems, modelling, collecting and analyzing data, estimating relationships, testing hypotheses and problem-solving.
3. Provides opportunities of playing with data sets by using statistical software.

2.3 Assessment/Grading Details

1. Mid-term Exam 20%
2. Final exam 30%
3. Team Projects 20% (Report 10% Presentation 10%)
4. Individual assignments 15%
5. Final report 15% (in Journal format)
6. Attendance and effective and useful class participation +/- up to 10%

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, honours, 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*.

2. Topics, Teaching and Assessment Schedule

1. An overview of the concepts and quantitative analysis
2. Regression analysis
3. Ordinary least squares
4. Simple linear regression
5. Multiple linear regression
6. Practical aspects of the linear regression models-multicollinearity, heteroscedasticity, autocorrelation and model selection
7. Learning to use regression analysis
8. The classical model
9. Hypothesis testing
10. Time series models
11. Panel data models
12. Additional Topics

3. Miscellaneous