Course Code
Empirical Business Analysis
3rd module, 2016~2017

Course Information

Instructor: Yeujun Yoon
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Office Hour: 2:00~3:00 pm. on Tues & Fri.

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Classes:
Lectures: 10:30am~12:20pm (session 1) / 1:30~3:20pm (session 2)
Venue: room 229

Course Website: N/A

1. Course Description

1.1 Context

This course provides applicable knowledge of econometrics for 1st year management students. The course begins with the brief review of probability and statistic theories which are essential for econometrics. We then cover the classical econometric methodologies which are popularly used in recent management researches such as regression model and panel data analysis. Even though the course provides necessary statistical and mathematical background to introduce these methodologies, the course focuses on the application of the econometric tools which are useful for students' academic research. The basic guidance of statistical software (MS-Excel or STATA) is also provided for students who have little experience of analyzing data. To make sure students' understanding, individual problem sets will be given after almost every week.

1.2 Textbooks and Reading Materials

"Introduction to Econometrics, 3E (2012)" by James H. Stock and Mark M. Watson
  (ISBN-10: 1-4082-6433-1 / ISBN-13: 978-1-4082-6433-1)

Additional reference
* "Econometric Theory and Methods" by Russell Davidson and James G. MacKinnon, Oxford
* "Microeconometrics: methods and applications" by A. Colin Cameron and Pravin K. Trivedi, Cambridge

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.	Team Project & Problem Set
	1.2. Students are able to professionally present their ideas and also logically explain and defend their argument.	Class discussion & Team Project
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.	Team Project
	2.2. Students will be able to apply leadership theories and related skills.	Team Project
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.	N/A
	3.2. Our students will practice ethics in the duration of the program.	N/A
4. Our graduates will have a global perspective.	4.1. Students will have an international exposure.	Global business examples used in lecture
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.	Lecture, Problem Set, Team Project , and Exam
	5.2. Our students will be prepared to face problems in various business settings and find solutions.	Lecture, Problem Set, Team Project , and Exam
	5.3. Our students will demonstrate competency in critical thinking.	Lecture, Problem Set, Team Project , and Exam

2.2 Course specific objectives

1) Provide students solid econometric knowledge necessary to assess their academic research and business problems
2) Improve students' ability of analyzing data, constructing model, and interpreting the estimation results
3) Get students hand dirty as much as possible: opportunities of playing with data sets by using statistical software.

2.3 Assessment/Grading Details

1. Course Assignments
1) Problem Set (Individual): Students solve the problem sets by using the technique learnt from the courses individually. Data would be given by instructor at the same day a problem set is distributed. You can use proper software to solve the problem set. The guidance for MS-Excel or STATA would be given during the class. Students must submit their final answers by deadline (BEFORE THE CLASS STARTS!). Paper version is strongly recommended! For special occasions, partial grade can be provided for late submission: however, you must get permission from an instructor first.

2) Project Assignment (Team): Students will form the team and each team is required to choose the own research questions, construct the model, and conduct analysis to answer the research questions by using econometric techniques leant in the class. A team must submit the

final report no later than deadline. Detailed guidance will be provided in the first class. Your team might be invited to present your work at the end of course

3) Final Exam: there is a comprehensive class-room exam at the end of the semester. The exam will cover the materials only we discuss in the class. The review session might be given before the exam according to the course schedule.

2. Grading

Category	%
Participation	10
Problem Sets	30
Project Assignment	20
Final Exam	40

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	Contents	Reading(Text) **	Assignment Due	Topics
1	- Course description - Introduction of Econometrics	Ch.1		
2	- Review of Probability & Statistics	Ch.2		Probability & Distribution
3	- Sampling Distribution	Ch.3	PS1	Sampling Distribution Property of Estimator
4	- Hypothesis Test I	Ch.3		Hypothesis Test Intro
5	- Hypothesis Test II	Ch.3		Frequently Used Hypothesis Tests
6	- Hypothesis Test III	Ch.3	PS2	Frequently Used Hypothesis Tests

7	- Hypothesis Test IV	Ch.3		ANOVA
8	- Linear Regression Model I	Ch.4, Ch.5, Ch.17		Concept of Regression Model
9	- Linear Regression Model II	Ch.6, Ch.7, Ch.18	PS3	Multiple Regression Model
10	- Linear Regression Model II	Ch.6, Ch.7, Ch.18		Multiple Regression Model
11	- Linear Regression Model III	Ch.8, Ch.9, Ch.18		Model Specification & Issues in Regression Model
12	- Linear Regression Model III	Ch.8, Ch.9, Ch.18	PS4	Model Specification & Issues in Regression Model
13	- Linear Regression Model III	Ch.8, Ch.9, Ch.18		Model Specification & Issues in Regression Model
14	- Linear Regression Model IV	Ch.9, Ch.12, Ch 15, Ch.18		Violation of OLS Assumptions
15	- Linear Regression Model IV	Ch.9, Ch.12, Ch 15, Ch.18	PS5	Violation of OLS Assumptions
16	- Panel Analysis I	Ch.10		Fixed Effect Model / Random Effect Model
17	- Panel Analysis II	Ch.10	PS6	Dynamic Panel Analysis
18	- Review & Project Presentation			Team Presentation

* This Course schedule is tentative. (subject to change)
** Additional reference will be provided in the class if necessary

4. Miscellaneous

1. Class Participation
   : You are required to be prepared and contribute regularly to our class discussion. Learning depends heavily upon thorough and lively participation and your preparation since I may from time to time call on individuals even when their hands are not raised. You should let me know before the start of class if some emergency has made it impossible for you to be prepared adequately for that class.

2. Class Room Policies
   - Do not disturb other classmates with distracting devices such as cell phones and laptops.
   - Additionally, please display the name card. My classes are very interactive, and so it is important for me to know who you are.
   - Do not come to class late or leave early. Once the class starts you are expected to stay in your seat. Of course, I understand that there are special circumstances that can make this necessary; if you do need to come to class late, or leave early, please let me know ahead of time.