Chinese University of Hong Kong,
Second semester 2016-2017
ECON3121D
Introductory Econometrics

Meeting Time: Wednesday 2:30AM - 5:15PM

Meeting Room: Esther Lee Bldg LT4

Instructor: Chih-Sheng Hsieh (cshsieh@cuhk.edu.hk)
Office: Esther Lee Bldg room 911
Instructor Office Hours: Thursday 10:00 am to 12:00 pm or by appointment at ELB 911
TA: Xuyan Lou (lou.xuyan@gmail.com) and Xiaoyu Zhang (hsiaoyucheung@gmail.com)
TA Office Hours: Thursday 3:00 pm to 5:00 pm or by appointment at ELB 1017

Course Overview

This course is designed to help students to be familiar with the concepts of econometrics and their application to data. The course will discuss the regression analysis extensively. Specific topics and extensions will include multivariate regression, dummy variables (including binary dependent variables), heteroscedasticity, time series, and simultaneous equations. The emphasis will be on understanding the intuition behind various econometric procedures and at the same time applying them to real economic data using statistical software like Excel, R, and STATA.

Textbook:

Introductory Econometrics: A Modern Approach (6^{th} edition) by Jeffrey Wooldridge, Cengage Learning 2016.

The book is available in the Commercial Press - University Bookstore, CUHK. I highly recommend every student to own this textbook as the lecture will follow the book closely and you will use the textbook for doing assignments and preparing exams.

Requirements:

1. Four problem sets (40%).
2. Course term paper (20%).
3. Final exam (40%).
4. Class attendance (5% bonus). You are encouraged to come to class. We will randomly have few attendance checks. If you show up in all attendance checks, then you will get 5% points.

Key rules:

1. Problem sets will go out on the scheduled dates, and you will have two weeks to do them. Problem sets will be collected on class of the due date. Late problem sets will be penalized. If you choose to hand in late, a 50% discount is applied for each day after the due date.
2. The final exam will be conducted centrally by the Registration and Examination Section (RES) from 26-29 April, 2 May & 4-13 May, 2017.
3. As a general rule, I do not give make-up Final exams. However, if there are exceptional Circumstances that make it impossible for you to take an exam at the scheduled time you should contact me **before** the exam. For medical emergency you should provide documentation from physician or hospital.
4. The term paper is due one week after the Final exam. You will hand in a printed hard copy to my mailbox located at ELB 9th floor. You are encouraged to have a meet with the instructor or TA to discuss your paper before the due.
5. Students are responsible for announcements made in class and via E-mail.

Tentative Schedule:

W1 (Jan 11): Introduction of regression and review of Statistics (Ch2 & Appendix B)

W2 (Jan 18): Review of Statistics (Appendix B & C) (PS1 assign)

W3 (Jan 25): Multiple regression & Ordinary Least Square (Ch3)

W4 (Feb 1): **Holiday** (Lunar New Year)

W5 (Feb 8): OLS and Hypothesis testing (Ch3 and Ch4, PS1 due)

W5 (Feb 15): OLS asymptotic properties (Ch5) (PS2 assign)

W7 (Feb 22): Specification issues (Ch6)

W8 (Mar 1): Dummy Variables (Ch7, PS2 due)

W9 (Mar 8): Binary Dependent Variable (Ch7, PS3 assign)

W10 (Mar 15): Heteroscedasticity and Serial Correlation (Ch8)

W11 (Mar 22): Measurement Error, Instrumental Variable (Ch9, PS3 due)

W12 (Mar 29): Simultaneous Equations (Ch16, PS4 assign)

W13 (April 5): Time Series Analysis (Ch10 & Ch11)

W14 (April 12): Miscellaneous topics and exam review (PS4 due)

W15 (April 19): Miscellaneous topics and exam review

Software:

The statistical software will be used extensively in the course. One reasonably good introduction of STATA is http://data.princeton.edu/stata/. Similarly, you can find R introduction in http://data.princeton.edu/R/. I will also do some software demonstrations in class. TA will give tutorial sessions and hold office hour to help you to learn the software. BUT do not expect either of us to give you command-by-command instruction to your problem sets before they are turned in.

Term paper:

You are required to hand in a maximum 10 pages long term paper (excluding appendix) at the end of this course. In this term paper, you should use the regression analysis to study the research question that you raise and provide interpretations on your findings. The paper should contain four (or five) parts:

1. Introduction: raise your research question here and justify why it is an interesting question.
2. Data and descriptive facts: use simple descriptive statistics to summarize the data
3. Regression analysis: use regression analysis to study your question and interpret the findings.
4. Conclusion: provide a short summary of your study.
5. Reference (or data appendix)

There is no assigned research topic. However, FYI, here are few web links that you can find plenty of regression studies and the associated data sets. You can duplicate part of the results from a research paper if you think that is fairly interesting and sophisticated enough.

Journal of Statistical Education
http://www.amstat.org/publications/jse/
Journal of Applied Econometrics http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1099-1255
American Economic Review
https://www.aeaweb.org/aer/index.php

Access STATA in ELB 916 Computing Lab:

There are two things to note before you can use the computer in the Lab:

(1) To enter the computing lab, you need to use your student card.
(2) To log in computers, you need to input your "Computing ID" and your "PC LAN password". Please note that your PC LAN password is different from your CWEM password. Your PC LAN password is provided to you from ITSC with a Computing Accounts Information Slip.

Honesty in Academic Work

Please visit the following website for details of university policy on Honesty in Academic Work: http://www.cuhk.edu.hk/policy/academichonesty/. Every assignment must be accompanied by a signed declaration of originality