



## COURSE OVERVIEW

The ability to apply econometric methods is an essential part of modern undergraduate degree training in economics. This module contributes to the achievement of these subject specific skills by providing an introduction to common issues and related econometric techniques relevant to the empirical evaluation and analysis of data pertinent to the fields of business and economics.

The module is approached in a practical way that focuses on the application and interpretation of econometric techniques to business and economic data, with less emphasis on the statistical theory aspects of the subject. This approach ensures that students gain knowledge and experience to undertake business and economic analysis with the use of computer software.

## KEY LEARNING OUTCOMES

On successful completion of the module, students should be able to:

- Critically understand of the nature of econometric models
- Abstract the essential features of an econometric issue or problem
- Have developed the analytical skills that allow students to formulate and consider a range of econometric problems and issues.
- Apply econometric software to business and economic data
- Perform and critically evaluate model adequacy using relevant diagnostic and specification tests
- Be critical in the interpretation and evaluation of their own empirical research and that of others in the areas of business and economic development

## ASSESSMENT

1. Midterm Test : 30%
2. Group Project: 30%
4. Final Test: 40%

Assessment of group project will be based on the group-work. This means that all members in a group will receive equal assessment for their aggregate work. All the group members should fully participate in the learning activities and contribute to the team's performance in good faith. More details will be provided in the class.

## TEACHING/LEARNING VEHICLES

### 1. Lecture Notes

The lecture slides will be available at Canvas before each class meeting. Students are expected to visit the site regularly, download, and preview the lecture slides and the relevant textbook chapters before coming to class.

### 2. Textbooks

The syllabus for the module is covered adequately by many textbooks. The core references are

- Main:  
*Introductory Econometrics: A Modern Approach*, 7<sup>th</sup> edition, South-Western. Woolridge J.M. (2019)  
*Using R for introductory Econometrics*, 2nd edition, Florian Heiss (2016)
- Supplementary:  
*Mostly harmless econometrics: An empiricist's companion*. Princeton University Press. Angrist, J. D., & Pischke, J. S. (2008).

### 3. Midterm Test

There will be several questions related to the lecture in the first 6 weeks. These problems are designed to check your progress as well as extend and reinforce concepts covered in class. Students are required to tackle the problems individually.

### 4. Group Project

Students will form their own team and one data analysis case study will be assigned. The case materials designed by the lecturer will be made available through Canvas as well. Each team will need to submit an analysis report and do a presentation in the scheduled lecture.

### 5. Final Test

The final test covers all the lecture materials throughout the course.

**Note that no make-up test is available for a missed test.**

## ACADEMIC HONESTY & PLAGIARISM

Academic integrity and honesty is essential for the pursuit and acquisition of knowledge. The University and School expect every student to uphold academic integrity & honesty at all times. Academic dishonesty is any misrepresentation with the intent to deceive, or failure to acknowledge the source, or falsification of information, or inaccuracy of statements, or cheating at examinations/tests, or inappropriate use of resources.

Plagiarism is 'the practice of taking someone else's work or ideas and passing them off as one's own' (The New Oxford Dictionary of English). The University and School will not condone plagiarism. Students should adopt this rule - You have the obligation to make clear to the assessor which is your own work, and which is the work of others. Otherwise, your assessor is entitled to assume that everything being presented for assessment is being presented as entirely your own work. This is a minimum standard. In case of any doubts, you should consult your instructor.

Additional guidance is available at: <http://www.nus.edu.sg/registrar/adminpolicy/acceptance.html#NUSCodeofStudentConduct>

Online Module on Plagiarism: <http://emodule.nus.edu.sg/ac/>

## TENTATIVE SCHEDULE

<b>Week</b>	<b>Lecture</b>
Week 1	<b>Course Overview and Introduction to Econometrics</b>
Week 2	<b>Review of Probability and Statistics</b>
Week 3	<b>Simple Linear Regression</b>
Week 4	<b>Simple Linear Regression &amp; Ordinary Least Square</b>
Week 5	<b>Multivariate Linear Regression</b>
Week 6	<b>More Topics on Regression</b>
<b>Recess Week</b>	
Week 7	<b>Midterm Test</b>
Week 8	<b>Logistic Regression</b>
Week 9	<b>Instrumental Variable Regression</b>
Week 10	<b>Differences in Differences &amp; Experiments</b>
Week 11	<b>Regression Discontinuity</b>
Week 12	<b>Group Project Presentation</b>
Week 13	<b>Final Test</b>
<b>Reading Week</b>	