

# BSE 4711 Econometrics For Business II

## AY2022/2023 Sem 1

NUS Business School  
Department of Strategy and Policy



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**Office:**

**Office Hours:**

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## 1 Course Description

This course will cover statistical methods based on the Econometrics literature that can be used for causal inference.

In economics and the social sciences more broadly, empirical analyses focus on the effects of counterfactual policies, such as the effect of implementing a government policy change, changing a price, showing advertisements, or introducing new products.

In this course, we will learn how these empirical tools can improve your understanding of management practices and decision-making using data and theory. We will learn how to pose a testable question, how to retrieve data, how to handle the data with a programming language, and most importantly, how to interpret the quantitative results and apply them in the real world.

## 2 Learning Outcomes

The goal of the course is to provide a clear framework to analyze and interpret data through the lenses of an economic model.

At the end of the course, the student should be able to

1. construct testable economic hypotheses.
2. support their argument using an economic framework and empirical analysis
3. collect and analyze data to test hypotheses.

### 3 Class Meetings: TBD

### 4 Office Hours

Please feel free to discuss course-related problems with me or with the TA during regular office hours. **You are strongly advised to discuss your difficulties before they become too serious.** To take full advantage of our meeting, please have your questions prepared, and abstain from using electronic devices during these sessions.

In addition to our regular office hours, I will on occasion have a **sign-up sheet outside** of my office that you can use to schedule an appointment for **extra office hours**. You are encouraged to use these extra office hours if you have a question that requires a one-on-one meeting. **Please do not sign up for more than one slot in the extra office hour session.**

### 5 Lectures Notes

I will post the lecture presentations for this class a day or two before each lecture. But these are not self-contained slides and are not substitutes for class participation. It is a roadmap of our lecture rather than a comprehensive manual.

### 6 Means of communication

Email is the most efficient way to reach me. **Please include the course number in the subject line (BSE4711), followed by a brief phrase summarizing the subject of your message.** I usually respond within 24 hours (except weekends). If you don't hear back from me by then, please do not hesitate to resend me an email.

Email does not work well for explaining lengthy concepts or graphs. If you do not understand a particular concept, it is probably better to see me or the T.A. in person. Finally, before emailing a question, see if your question can first be answered by looking at the syllabus, the LumiNus website, recent email announcements, or by asking a classmate. For example: "Is there homework due?" or "When is the exam?" are good examples of this redundancy.

### 7 Textbooks

There is no textbook assigned for the course. If you wish to consult a textbook for reference, the following textbooks can be quite useful:

- Greene (2017). *Econometric Analysis*. ISBN: 0134461363
- Hayashi (2000). *Econometrics*. ISBN: 0691010188
- Wooldridge (2019). *Introductory Econometrics: A Modern Approach* ISBN:0324289782

## 8 Tentative Course Schedule

Week	Topics	Readings
1	Review, Preliminaries Introduction to Econometricss	
2	<b>Econometrics in Action (I) Econometrics Mod- eling of Financial Returns</b> Time Series Analysis (I)	
3	Time Series Analysis (II)	
4	<b>Econometrics in Action (II): Hedging against macroeconomic and political risk</b>	
5	Panel Data Midterm Review	
6	<b>Econometrics in Action (II) Part I: Management Practices Differ across Firms and Countries</b> Midterm	
<b>Recess Week</b>		
7	<b>Econometrics in Action (III) Part II: Manage- ment Practices Differ across Firms and Coun- tries.</b>	
8	Experiments and Randomization	
9	<b>Econometrics in Action (IV): Advertising Exper- iments at RestaurantGrades</b>	
10	Demand Estimation	
11	<b>Econometrics in Action (V): Demand Estimation using Unique Product Code (UPC) data</b>	
12	Big data and Econometricss <b>Econometrics in Action (VI): Using Big Data to Estimate Consumer Surplus (contingent on time availability)</b>	
13	Wrap-up <b>Final Test</b>	
<b>Reading Week</b>		

## 9 Requirements and Grading:

### 9.1 Group Assignment

1. I will give 2 Group Assignment during the course.
2. No late Assignment will be accepted.

3. **All of your answers should be typed and submitted via LumiNus, including graphs and algebra. Work that is not typed gets an automatic penalty of 25% of the total grade.**
4. **Assignment are team-based (group of min 4 - max 5). All the team members are expected to work cooperatively as a group. I just need one copy per group.**
5. **Nearly identical works will be considered as plagiarism and an automatic zero will be assigned for that assignment.**

## 9.2 Individual Assignments

1. Midterm Assignment: **week 6**
2. Final Assignment: **week 13**
3. Qualified students with disabilities who anticipate needing any type of accommodation in this course should notify the instructor by the third week of class.

## 10 Grading Policy and Grading Scale

The following table gives the composition of the final scores:

Activities	Percentage of final grade
Group Assignment	20%
Individual Quiz	20%
Class Participation	10%
Midterm Individual Assignment	25%
Final Individual Assignment	25%

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## PROCEDURES AND POLICIES

### STATEMENT OF ACADEMIC INTEGRITY:

The University is committed to nurturing an environment conducive for the exchange of ideas, advancement of knowledge, and intellectual development. Academic honesty and integrity are essential conditions for the pursuit and acquisition of knowledge, and the University expects each student to maintain and uphold the highest standards of integrity and academic honesty at all times.

The University takes a strict view of cheating in any form, deceptive fabrication, plagiarism, and violation of intellectual property and copyright laws. Any student who is found to have engaged in such misconduct will be subject to disciplinary action by the University.

It is important to note that all students share the responsibility of protecting the academic standards and reputation of the University. This responsibility can extend beyond each student's own conduct, and can include reporting incidents of suspected academic dishonesty through the appropriate channels. Students who have reasonable grounds to suspect academic dishonesty should raise their concerns directly to the relevant Head of Department, Dean of Faculty, Registrar, Vice Provost or Provost.

For further information, see <http://www.nus.edu.sg/osa/resources/code-of-student-conduct>.