



COURSE INFORMATION

Course Title:

ECON510 Elements of Econometrics (Postgraduate)

Semester:

January Session, 2020

Class hour: Monday through Friday, 180 minutes each day, for three weeks. At the end of each week, there will be a one-hour discussion session. The course instructor is available by appointment.

CREDITS(s): 3

Field Trip: According to the professors' teaching plan.

OVERVIEW

Course description

ECON510 Elements of Econometrics is suitable for students with basic Economics and Statistics background. This course focuses both the theoretical and application of econometric models to solve real-world problems. The objective of this course is to help students to develop a solid understanding in introductory-level econometrics and ability to critique empirical studies in economics.

LEARNING OUTCOME

Upon successful completion of the requirements for this course, students will be able to:

- Understand the application of statistics in econometric analysis
- Develop, test and interpret results of test hypothesis
- Apply linear regression model for prediction
- Detect the presence of multicollinearity in an econometric model
- Use dummy variables and understand their interaction in a regression model
- Learn methods for Detecting and Resolving Heteroskedasticity
- Learn general approaches for testing and remedial measures for Autocorrelation
- Understand to estimate models with panel data/cross-sectional time-series data, and test for fixed effects and random effects models
- Estimating dynamic regression model
- Learn the principles and practices of time series regression and forecasting.

LEARNING RESOURCES



Suggested textbook

Introduction to Econometrics, 3rd Edition (2015), Authors: James H. Sock and Mark W. Wastson, Publisher: Pearson

Additional Resource

- Introduction to Econometrics, 5th Edition (2016), Author: Christopher Dougherty, Publisher: Oxford University Press

WEEKLY SCHEDULE

Week	Day	Topic	Reading
1	1	Part I. Introduction and Review Introduction to econometrics, Review of Probability and Statistics	Chapter 1, 2 & 3
	2	Part II. Fundamentals of Regression Analysis Linear Regression with One Regressor	Chapter 4
	3	Regression with a Single Regressor: Hypothesis Tests and Confidence Intervals	Chapter 5
	4	Linear Regression with Multiple Regressors	Chapter 6
	5	Hypothesis Tests and Confidence Intervals in Multiple Regression Submit Home Work 1	Chapter 7
2	1	Nonlinear Regression Functions	Chapter 8
	2	Assessing Studies Based on Multiple Regression	Chapter 9
	3	Part III. Further Topics in Regression Analysis Regression with Panel Data	Chapter 10
	4	Regression with a Binary Dependent Variable	Chapter 11
	5	Submit Research Project & Presentation	
3	1	Instrumental Variables Regression Submit Home Work 2	Chapter 12
	2	Experiments and Quasi-Experiments	Chapter 13
	3	Part IV. Regression Analysis of Economic Time Series Data Introduction to Time Series Regression and Forecasting	Chapter 14



	4	Review	
	5	Final Exam	

ASSESSMENT

Assessment Task	Score Percentage
Attendance and Participation	10%
Homework	20%
Research Project and Presentation	30%
Final Exam	40%
Total	100%

DETAILS ON GRADE COMPONENTS

Note on Assessment:

Attendance and Participation: Students are required to attend all classes and participate actively. Students should treat their classroom obligations as they would treat any serious professional engagement. Your participation grade will be based on the instructor's assessment of how well you contribute to classroom dynamics relative to your class peers.

NB: In case of an absence, the student is responsible for the materials and assignments for that class; it is the student's responsibility to inform the instructor regarding absences and assignments that are missed. **Unexcused absence from three or more scheduled class sessions will be grounds for failure in this course.** If you do have to miss class due to a personal emergency, please let the instructor know as soon as possible. Such emergencies will be dealt with on a case-by-case basis.

Participation grades will be based on **quality** (an in-class performance that reflects intellectual depth, insightfulness, and contribution to class learning) and **quantity** (consistency and regularity of performance).

Accordingly, **you are expected to read the related chapters before participating in the class.** Be prepared to be called upon to "open" a class discussion by presenting your full analysis and thoughts on the assigned topic at the start of class, or to be asked through a "cold call" for comment during the discussion.

The grading of class participation is necessarily a subjective exercise. However, high-quality comments have one or more of the following characteristics: **(1) insightfulness, (2)**



appropriate application of course concepts, and (3) advancement of the in-class discussion at hand.

The grading of class participation is necessarily a subjective exercise. However, high-quality comments have one or more of the following characteristics: **(1) insightfulness, (2) appropriate application of course concepts, and (3) advancement of the in-class discussion at hand.**

Some specific criteria for evaluating discussion contributions are:

- Does the student demonstrate an eagerness to participate?
- Is the student a good listener? Does he/she build on others' comments?
- Is the student willing to interact with other class members?
- Are the points made relevant to the discussion? Are they linked to others' comments?
- Do comments demonstrate evidence of in-depth analysis of the case?
- Do comments add to our understanding of the situation?
- Do comments make a substantive contribution to the advancement of our analysis?
- Is there a willingness to test new ideas, or are the comments "safe?"
- Do comments show an understanding of concepts or analytical techniques properly applied to the current situation?
- Is the student presenting insightful quantitative analysis (when required)?
- Is the student demonstrating ethical considerations and insights?

Home Work, Weight 20%

Students will receive 2 sets of problem. Each problem set worth 10 points. **A student can work in a group, but each member of the group must submit his/her own write-up.** Recommended group size is 3 to 4 persons per group. Group size should not exceed 4 persons.

Research Project and Presentation, Weight 30%

Presentation: 10 minutes/ Group

Group Project: 3 to 4 students/Group



Project Description:

You are expected to formulate a hypothesis, analyses data and write a report summarising your findings and policy advice based on your finding(s).

Final Exam, Weight 40%

Question type: Multiple Choice, Short Questions and Problem Solving

Duration: 120 minutes plus 10 minutes Reading Time.

Description: The final exam is comprehensive. All the topics covered in this course are included in the exam. Please talk to the lecturer for more details about the final exam.

Course Grading:

Upon completion of this course, you receive a final grade. A final grade is a letter grade that carries with it a numerical value, as outlined below.

Grade	Mark
A	80-100
B	70-79
C	60-69
D	50-59
E	0-49

To pass this subject, students are required to obtain Grade B or above in order to satisfy all the intended learning outcomes.

CLASSROOM ETHICS & COURSE POLICIES

Being respectful of others’ opinions, values and culture

Cell phones are only permitted when the usage is related to the course. Absolutely **NO TEXTING** during class will be tolerated. If you have an emergency situation and you must be able to be reached, set the phone to vibrate and leave the room immediately when it goes off.

Any student with a documented disability needing academic adjustments or accommodations should notify the instructor or the program administrator before the start of the program, so



such an arrangement will be made accordingly.

Any student who anticipates a schedule conflict because of religious reasons should make arrangements within two weeks of the start of class.

Academic misconduct

Please follow the guideline of the university policy. Academic dishonesty or misconduct will not be tolerated and may result in disciplinary action including a grade F for the course. Work submitted must be the original work of the student. Original work may include the words and ideas of others, but the source of these words and ideas must be indicated in a manner consistent with an academically recognized form, style, and citation manual. Resubmission of work previously presented in another course is prohibited.