

Department	International College of Liberal Arts		
Semester	Spring 2025	Year Offered (Odd/Even/Every Year)	Every Year
Course Number	ECON/DATA291		
Course Title	Econometrics		
Prerequisites	QREA/PSCI/ECON203 Statistics		
Course Instructor	SHENG Dachen	Year Available (Grade Level)	2
Subject Area	Global Business & Economics	Number of Credits	3
Class Style	Lecture	Language of instruction	English

(NOTE 1) Depending on the class size and the capacity of the facility, we may not be able to accommodate all students who wish to register for the course

Course Description	This module is an introductory level econometrics module. It provides the solid basis of methodology to explore the causality relationship in economics and finance. Econometrics prepares students to have enough skills to treat and understand data analyses. The course starts with the concept and econometric reasoning. The data types, including cross-sectional and panel data, will be introduced, and the format of data fits R will be demonstrated to prepare the practical coding training. The ordinary least squares (OLS) is the primary regression technique in this course. Other methods are covered, including panel regression individual and time controls, dummy variable, instrumental variable, Logit and Probit regressions. Students are encouraged to read the textbook to understand the background. Although mathematical proof and reasoning are NOT required for this course, students are encouraged to self-explore and challenge their learning capability, which is believed would help them greatly if they want an excellent empirical thesis in the near future.
Class plan based on course evaluation from previous academic year	Students are more than welcome to provide feedback, particularly how they feel about how the course connects with other courses, their future studies, and whether they are willing to use the econometrics methods in the GRP report.
Course related to the instructor's practical experience (Summary of experience)	N/A
Learning Goals	After completing the course, students should be able to: 1. Understand the purpose of econometrics and the feature of numerical research 2. Demonstrate the understanding of the methods covered 3. Demonstrate the data collection, trimming and classification skills 4. Explain the methods used in the research paper and the economic meaning of the results 5. Prove their coding skills and research methodology by completing their final projects

iCLA Diploma Policy	DP1/DP2/DP3/DP4
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## iCLA Diploma Policy

(DP1) To Value Knowledge – Having high oral and written communication skills to be able to both comprehend and transfer knowledge

(DP2) To Be Able to Adapt to a Changing World – Having critical, creative, problem-solving, intercultural skills, global and independent mindset to adopt to a changing world

(DP3) To Believe in Collaboration – Having a disposition to work effectively and inclusively in teams

(DP4) To Act from a Sense of Personal and Social Responsibility – Having good ethical and moral values to make positive impacts in the world

Active Learning Methods	Problem-Based Learning/Discussion, Debate/Group Work/Presentation/Workshop, Fieldwork			
More details/supplemental information on Active Learning Methods	The project is used to evaluate part of the student's overall performance. The project starts soon after the class coverage of data collection (week 5, as a tentative plan) and is continuous until the semester ends. Students are encouraged to communicate frequently with the instructor to improve the quality of their work. It is difficult for students to complete everything within a short time to achieve high quality, but frequent self-correct and updates would significantly improve the quality of work.			
Use of ICT	Unipa is used for communication purposes. Excel is used for the data collection, and R is used as the platform for coding the regressions.			
Contents of class preparation and review	Students are required to preview and review the class content. Students are encouraged to read the textbook and raise questions, if any.	Hours expected to be spent preparing for class (hours per week)	3 hours	Hours expected to be spent on class review (hours per week)
Feedback Methods	The instructor provides frequent feedback. The students are encouraged to communicate with the instructor frequently when working on their projects.			

Grading Criteria		
Grading Methods	Grading Weights	Grading Content
Class participation	30%	Engagement
Quiz 1	10%	Questions
Quiz 2	10%	Questions
Project	50%	Data 10% Methodology 20% Results 10% Final project, presentation and peer evaluation 10%

Required Textbook(s)	Jeffrey M. Wooldridge, Introductory Econometrics: A Modern Approach, Seventh Edition
Other Reading Materials/URL	Research papers will be distributed during the class.

Plagiarism Policy	Zero tolerance for any plagiarism. It is acceptable when students have demonstrated their effort but not doing well but not for any cheating behaviours.
Other Additional Notes (Outline crucial policies and info not mentioned above)	Students are encouraged to discuss with the instructor if any difficulties occur during the semester.

(NOTE 2) Class schedule is subject to change

Class Schedule	
Class Number	Content
Class 1	Chapter 1, Introduction, understand what econometrics is and what is the numerical model.
Class 2	Chapter 2, Simple regression
Class 3	Chapter 2, Simple regression
Class 4	Chapter 2, Simple regression
Class 5	Chapter 3, Multivariable Regression: Estimation
Class 6	Chapter 3, Multivariable Regression: Estimation
Class 7	Chapter 3, Multivariable Regression: Estimation

Class 8	Chapter 3, Multivariable Regression: Estimation
Class 9	Chapter 3, Multivariable Regression: Estimation
Class 10	Chapter 3, Multivariable Regression: Estimation
Class 11	Chapter 4, Multivariable Regression: Inference
Class 12	Chapter 4, Multivariable Regression: Inference
Class 13	Chapter 4, Multivariable Regression: Inference
Class 14	Chapter 4, Multivariable Regression: Inference
Class 15	Chapter 5, Asymptotic Properties of the Ordinary Least Square
Class 16	Chapter 5, Asymptotic Properties of the Ordinary Least Square
Class 17	Chapter 6, Multivariable Regression: Further Issues

Class 18	Chapter 6, Multivariable Regression: Further Issues
Class 19	Chapter 7, Multivariable Regression Analysis with Qualitative information
Class 20	Chapter 7, Multivariable Regression Analysis with Qualitative information
Class 21	Chapter 8, Heteroskedasticity
Class 22	Chapter 8, Heteroskedasticity
Class 23	Data: Cross-sectional and Panel Data
Class 24	Data: Cross-sectional and Panel Data
Class 25	Pooling method and Two ways Controls
Class 26	Pooling method and Two ways Controls
Class 27	Student Short Presentation

Class 28	Student Short Presentation
Class 29	Student Short Presentation
Class 30	Student Short Presentation