Tamkang University Academic Year 105, 2nd Semester Course Syllabus

Course Title	ADVANCED ECONOMETRICS	Instructor	PEI-CHIEN LIN
Course Class	TLEXM1A MASTER'S PROGRAM, DEPARTMENT OF INDUSTRIAL ECONOMICS, 1A	Details	◆ Selective ◆ One Semester ◆ 3 Credits

Departmental Aim of Education

Ⅰ. Training up students to establish the specialized knowledge in industrial economics.

Ⅱ. Training up students to strengthen the diversity of knowledge in learning.

Ⅲ. Training up students with the ability in researches.

Ⅳ. Training up students with the self-cultivation in moral character.

Ⅴ. Training up students with the macroscopic vision in globalization.

Ⅵ. Training up students with the leadership in industrial development.

Departmental core competences

A. With the ability of academic research in industrial economics.

B. With the ability of theoretical modeling and empirical applications.

C. With the ability of data collection and literature review.

D. With the ability of searching research topics.

E. With the ability of independent research in advanced practical analyses and industrial policy-making.

Course Introduction	Econometrics is based on the development of statistical method for estimating economic relationships, testing economic theory and evaluating government policy and business decision. In this courses, I will introduce the structures (or types) of economic data first and then the appropriate methodologies to analyze them. The topics covered include multiple regression on cross-sectional data, regression on time series data, panel data models, instrumental variables estimation, simultaneous equation model, limited dependent variable models, and advanced time series topics.

The Relevance among Teaching Objectives, Objective Levels and Departmental core competences

I.Objective Levels (select applicable ones) :

(i) Cognitive Domain : C1-Remembering, C2-Understanding, C3-Applying, C4-Analyzing, C5-Evaluating, C6-Creating

(ii) Psychomotor Domain : P1-Imitation, P2-Mechanism, P3-Independent Operation, P4-Linked Operation, P5-Automation, P6-Origination

(iii) Affective Domain : A1-Receiving, A2-Responding, A3-Valuing, A4-Organizing, A5-Charaterizing, A6-Implementing

II.The Relevance among Teaching Objectives, Objective Levels and Departmental core competences :

(i) Determine the objective level(s) in any one of the three learning domains (cognitive, psychomotor, and affective) corresponding to the teaching objective. Each objective should correspond to the objective level(s) of ONLY ONE of the three domains.

(ii) If more than one objective levels are applicable for each learning domain, select the highest one only. (For example, if the objective levels for Cognitive Domain include C3,C5,and C6, select C6 only and fill it in the boxes below. The same rule applies to Psychomotor Domain and Affective Domain.)

(iii) Determine the Departmental core competences that correspond to each teaching objective. Each objective may correspond to one or more Departmental core competences at a time. (For example, if one objective corresponds to three Departmental core competences: A,AD, and BEF, list all of the three in the box.)

No.	Teaching Objectives	Relevance	
		Objective Levels	Departmental core competences
1	1. To establish students' knowledge on the field of Econometrics.	C2	A
2	2. To cultivate students' capability of empirical modeling and reasoning.	C3	BC
3	3. To assist students finding interested research topics.	C6	D

Teaching Objectives, Teaching Methods and Assessment

No.	Teaching Objectives	Teaching Methods	Assessment
1	1. To establish students' knowledge on the field of Econometrics.	Lecture, Discussion	Practicum, Report, Participation
2	2. To cultivate students' capability of empirical modeling and reasoning.	Lecture, Discussion, Practicum	Practicum, Report, Participation
3	3. To assist students finding interested research topics.	Lecture, Discussion, Practicum	Practicum, Report, Participation

This course has been designed to cultivate the following essential qualities in TKU students

Essential Qualities of TKU Students	Description
◆ A global perspective	Helping students develop a broader perspective from which to understand international affairs and global development.
◆ Information literacy	Becoming adept at using information technology and learning the proper way to process information.
◇ A vision for the future	Understanding self-growth, social change, and technological development so as to gain the skills necessary to bring about one's future vision.
◆ Moral integrity	Learning how to interact with others, practicing empathy and caring for others, and constructing moral principles with which to solve ethical problems.
◆ Independent thinking	Encouraging students to keenly observe and seek out the source of their problems, and to think logically and critically.
◇ A cheerful attitude and healthy lifestyle	Raising an awareness of the fine balance between one's body and soul and the environment; helping students live a meaningful life.
◇ A spirit of teamwork and dedication	Improving one's ability to communicate and cooperate so as to integrate resources, collaborate with others, and solve problems.
◇ A sense of aesthetic appreciation	Equipping students with the ability to sense and appreciate aesthetic beauty, to express themselves clearly, and to enjoy the creative process.

Course Schedule

Week	Date	Subject/Topics	Note
1	106/02/13 ~ 106/02/19	Heteroskedasticity	
2	106/02/20 ~ 106/02/26	Specification and Data Issue	
3	106/02/27 ~ 106/03/05	Time Series Data (Basic Regression)	Assignment 1
4	106/03/06 ~ 106/03/12	[In Class Presentation of Computer Exercise Problems 1]	
5	106/03/13 ~ 106/03/19	Time Series Data (Further Issues)	
6	106/03/20 ~ 106/03/26	Time Series Data (Serial Correlation and Heteroskedasticity)	
7	106/03/27 ~ 106/04/02	Advanced Time Series Topic	Assignment 2
8	106/04/03 ~ 106/04/09	Holiday break	
9	106/04/10 ~ 106/04/16	[In Class Presentation of Computer Exercise Problems 2]	
10	106/04/17 ~ 106/04/23	Panel Data Model (Simple Panel Data Method)	
11	106/04/24 ~ 106/04/30	Panel Data Model (Advanced Panel Data Method)	
12	106/05/01 ~ 106/05/07	Instrumental Variables Estimation and 2SLS	Assignment 3

13	106/05/08 ~ 106/05/14	[In Class Presentation of Computer Exercise Problems 3]	
14	106/05/15 ~ 106/05/21	Limited Dependent Variable Model	
15	106/05/22 ~ 106/05/28	Limited Dependent Variable Model	
16	106/05/29 ~ 106/06/04	Thesis presentation	
17	106/06/05 ~ 106/06/11	Presentation for term paper	
18	106/06/12 ~ 106/06/18	Presentation for term paper	

Requirement	
Teaching Facility	Computer, Projector
Textbook(s)	Wooldridge, J. M., Introductory Econometrics: A modern Approach, international edition.
Reference(s)	1. Maddala, C. S., Introduction to Econometrics, 4rd ed. 2010. 2. Baltagi, B. H., Econometric Analysis of Panel Data, 4rd ed. 2008. 3. Enders, W., Applied Econometric Time Series, 3rd ed., 2010.
Number of Assignment(s)	4 (Filled in by assignment instructor only)
Grading Policy	◆ Attendance： 10.0 % ◆ Mark of Usual：45.0 % ◆ Midterm Exam： % ◆ Final Exam： % ◆ Other〈term paper〉：45.0 %
Note	This syllabus may be uploaded at the website of Course Syllabus Management System at http://info.ais.tku.edu.tw/csp or through the link of Course Syllabus Upload posted on the home page of TKU Office of Academic Affairs at http://www.acad.tku.edu.tw/CS/main.php . **※ Unauthorized photocopying is illegal. Using original textbooks is advised. It is a crime to improperly photocopy others' publications.**