

## Tamkang University Academic Year 105, 2nd Semester Course Syllabus

Course Title	DATA ANALYSIS AND EMPIRICAL RESEARCH	Instructor	CHUN-HUNG LIN
Course Class	TLEXM1A MASTER'S PROGRAM, DEPARTMENT OF INDUSTRIAL ECONOMICS, 1A	Details	<ul style="list-style-type: none"> <li>◆ Selective</li> <li>◆ One Semester</li> <li>◆ 3 Credits</li> </ul>
D e p a r t m e n t a l   A i m   o f   E d u c a t i o n			
<p>I. Training up students to establish the specialized knowledge in industrial economics.</p> <p>II. Training up students to strengthen the diversity of knowledge in learning.</p> <p>III. Training up students with the ability in researches.</p> <p>IV. Training up students with the self-cultivation in moral character.</p> <p>V. Training up students with the macroscopic vision in globalization.</p> <p>VI. Training up students with the leadership in industrial development.</p>			
D e p a r t m e n t a l   c o r e   c o m p e t e n c e s			
<p>A. With the ability of academic research in industrial economics.</p> <p>B. With the ability of theoretical modeling and empirical applications.</p> <p>C. With the ability of data collection and literature review.</p> <p>D. With the ability of searching research topics.</p> <p>E. With the ability of independent research in advanced practical analyses and industrial policy-making.</p>			
Course Introduction	<p>Introducing advanced econometrics concepts and empirical analyses, including multiple regression, dummy variable, heteroskedasticity, panel data, 2SLS and simultaneous equation. Furthermore, limited dependent variable models are also discussed in this course.</p>		

**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-Characterizing, 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. Enhance students' understanding on advanced econometric concepts. 2. Apply advanced econometric theories to the empirical issues. 3. Provide a basic training for empirical researches for students' theses.	C4	AC

**Teaching Objectives, Teaching Methods and Assessment**

No.	Teaching Objectives	Teaching Methods	Assessment
1	1. Enhance students' understanding on advanced econometric concepts. 2. Apply advanced econometric theories to the empirical issues. 3. Provide a basic training for empirical researches for students' theses.	Lecture, Discussion	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	Multiple regression: Estimation	
2	106/02/20 ~ 106/02/26	Multiple regression: Inference	
3	106/02/27 ~ 106/03/05	Multiple regression: Further Issues	
4	106/03/06 ~ 106/03/12	Multiple regression with Qualitative Information: Dummy variable (I)	
5	106/03/13 ~ 106/03/19	Multiple regression with Qualitative Information: Dummy variable (II)	
6	106/03/20 ~ 106/03/26	Heteroskedasticity (I)	
7	106/03/27 ~ 106/04/02	Heteroskedasticity (II)	
8	106/04/03 ~ 106/04/09	More on specification and data issues (I)	
9	106/04/10 ~ 106/04/16	More on specification and data issues (II)	
10	106/04/17 ~ 106/04/23	Simple panel data model	
11	106/04/24 ~ 106/04/30	Advanced panel data models (I)	
12	106/05/01 ~ 106/05/07	Advanced panel data models (II)	

13	106/05/08 ~ 106/05/14	Instrumental variables estimation and 2SLS (I)	
14	106/05/15 ~ 106/05/21	Instrumental variables estimation and 2SLS (II)	
15	106/05/22 ~ 106/05/28	Simultaneous equation models (I)	
16	106/05/29 ~ 106/06/04	Simultaneous equation models (II)	
17	106/06/05 ~ 106/06/11	Limited dependent variable models (I)	
18	106/06/12 ~ 106/06/18	Limited dependent variable models (II)	
Requirement			
Teaching Facility	Computer, Projector		
Textbook(s)	Jeffrey M. Wooldridge, "Introductory Econometrics: A Modern Approach" ,4th edition (2009)		
Reference(s)			
Number of Assignment(s)	10 (Filled in by assignment instructor only)		
Grading Policy	◆ Attendance :           %   ◆ Mark of Usual :           %   ◆ Midterm Exam : 30.0 % ◆ Final Exam :   30.0 % ◆ Other <Presentation> : 40.0 %		
Note	This syllabus may be uploaded at the website of Course Syllabus Management System at <a href="http://info.ais.tku.edu.tw/csp">http://info.ais.tku.edu.tw/csp</a> or through the link of Course Syllabus Upload posted on the home page of TKU Office of Academic Affairs at <a href="http://www.acad.tku.edu.tw/CS/main.php">http://www.acad.tku.edu.tw/CS/main.php</a> . <b>※ Unauthorized photocopying is illegal. Using original textbooks is advised. It is a crime to improperly photocopy others' publications.</b>		