

## Tamkang University Academic Year 106, 1st Semester Course Syllabus

Course Title	QUANTITATIVE METHODS	Instructor	CHEN, YING-ERH
Course Class	TLIXM1A MASTER'S PROGRAM, DEPARTMENT OF INSURANCE MANAGEMENT, 1A	Details	<ul style="list-style-type: none"> <li>◆ Selective</li> <li>◆ One Semester</li> <li>◆ 2 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 . Emphasize on a monographic study on insurance, and enhance professional knowledge of insurance.</p> <p>II . Enhance training for analytical thinking, and strengthen problem-solving and analytical skills.</p> <p>III . Focus on industry-university cooperation, and combine theory and practical issues.</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. Students will exhibit the ability of risk management and an insurance operation.</p> <p>B. Students will exhibit the ability to design insurance products.</p> <p>C. Students will exhibit the ability of financial planning for insurance products.</p> <p>D. Students will exhibit analytical and problem-solving skills.</p> <p>E. Students will exhibit the ability to perform research.</p> <p>F. Students will exhibit international perspectives.</p>			
Course Introduction	<p>The main goal of this course is to introduce the application methods for master students. We will focus on linear regression with one and multiple regressors including confidence intervals, testing hypothesis and dummy variables. Meanwhile, we will introduce quantity software such as R. Students will exhibit an understanding of major topics in quantitative methods and develop skills for dealing with quantitative problems.</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-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	We will introduce the application of statistical methods in theory and practice for master students.	C4	D

**Teaching Objectives, Teaching Methods and Assessment**

No.	Teaching Objectives	Teaching Methods	Assessment
1	We will introduce the application of statistical methods in theory and practice for master students.	Lecture, Discussion, Problem solving	Written test, 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	106/09/18 ~ 106/09/24	Syllabus overview/Introduction	
2	106/09/25 ~ 106/10/01	Simple Regression Model- Deriving OLS estimators	
3	106/10/02 ~ 106/10/08	Mid_Autumn Festival	
4	106/10/09 ~ 106/10/15	Simple Regression Model- properties of OLS estimators	
5	106/10/16 ~ 106/10/22	Simple Regression Model- Expected value and variances of the OLS estimators	
6	106/10/23 ~ 106/10/29	Software R Demonstration	
7	106/10/30 ~ 106/11/05	Multiple Regression Model- Deriving and properties of OLS estimators	
8	106/11/06 ~ 106/11/12	Multiple Regression Model- Expected value and variance of the OLS estimators	
9	106/11/13 ~ 106/11/19	Software R Demonstration	
10	106/11/20 ~ 106/11/26	Midterm Exam	
11	106/11/27 ~ 106/12/03	Multiple Regression Analysis- Testing hypotheses	

12	106/12/04 ~ 106/12/10	Software R Demonstration	
13	106/12/11 ~ 106/12/17	Multiple Regression Analysis- Testing hypotheses	
14	106/12/18 ~ 106/12/24	Multiple Regression Analysis- Dummy variables	
15	106/12/25 ~ 106/12/31	Reporting regression Results; Software R Demonstration	
16	107/01/01 ~ 107/01/07	Presentation	
17	107/01/08 ~ 107/01/14	Presentation	
18	107/01/15 ~ 107/01/21	Final Exam	
Requirement			
Teaching Facility	Computer, Projector		
Textbook(s)	Introductory Econometrics: A Modern Approach, Jeffrey M. Wooldridge, South-Western, Cengage Learning		
Reference(s)			
Number of Assignment(s)	(Filled in by assignment instructor only)		
Grading Policy	<p>◆ Attendance : 5.0 %    ◆ Mark of Usual :        %    ◆ Midterm Exam : 30.0 %</p> <p>◆ Final Exam : 35.0 %</p> <p>◆ Other &lt;presentation&gt; : 30.0 %</p>		
Note	<p>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> .</p> <p><b>※ Unauthorized photocopying is illegal. Using original textbooks is advised. It is a crime to improperly photocopy others' publications.</b></p>		