



## 教學計劃表 Syllabus

|   |  |                             |                                 |  |
|---|--|-----------------------------|---------------------------------|--|
| 課程名稱(中文)<br>Course Name in Chinese  | 計量經濟分析(一)  |                             | 學年/學期<br>Academic Year/Semester | 102/1  |
| 課程名稱(英文)<br>Course Name in English  | Econometric Analysis ( I )   |                             |                                 |  |
| 科目代碼<br>Course Code   | IIE_54600  | 系級<br>Department & Year     | 碩士                              | 開課單位<br>Course-Offering Department   |
| 修別<br>Type  | 必修 Required  | 學分數/時間<br>Credit(s)/Hour(s) | 3.0/3.0                         |  |
| 授課教師<br>Instructor  | /陳建福   |                             |                                 |  |
| 先修課程<br>Prerequisite  |  |                             |                                 |  |
| 課程描述 Course Description   |  |                             |                                 |  |
| <p>This course is the first course in econometrics at the graduate level. We will cover the basic and modern methods of econometric theory. The course materials will provide the students a foundation for empirical methods in economics.</p> <p>The course is based primarily on the textbook ‘‘Econometric Analysis’’, by W. Greene. It is assumed that students have taken an undergraduate econometrics course. However, students who have not taken an econometrics course at undergraduate may need to read an undergraduate -level econometrics book written by Wooldridge or Gujarati and Porter.</p> <p>In this course students must learn how to use <code>{\sf Stata}</code> or other packages (for example, R, EViews, GAUSS, MATLAB, RATS, SAS, or TSP) to replicate examples in the textbook.</p> |  |                             |                                 |  |
| 課程目標 Course Objectives  |  |                             |                                 |  |
| <p>為本所必修課程之一，本所學生必須具有計量經濟學的訓練才能，根據經濟理論作實證分析，預測等分析，為本所特色之一。</p>  |  |                             |                                 |  |
| 系專業能力<br>Basic Learning Outcomes  |  |                             |                                 | 課程目標與系專業能力相關性<br>Correlation between Course Objectives and Dept.' s Education Objectives |
| A   | 數理分析能力：通曉經濟學的理論技巧，應用數學與賽局解決經濟議題的能力。Mathematical analysis skills: Mastering in application of mathematical theories and game theory in analyzing economic issues  |                             |                                 |  |
| B   | 實證經濟分析能力：通曉經濟學的實證技巧，善用資訊科技進行資訊蒐集、資料統計與計量分析。Empirical analysis skills: Mastering in application of statistics and econometrics in data collection and examination |                             |                                 | ●  |
| C   | 微觀經濟之闡釋能力：通曉個體經濟學相關的理論與應用。Microeconomic perspective: Thorough understanding of microeconomic theories and relevant application                                   |                             |                                 |  |
| D   | 宏觀經濟之闡釋能力：通曉總體經濟學相關的理論與應用。Macroeconomic perspective: Thorough understanding of macroeconomic theories and relevant application                                   |                             |                                 |  |
| E   | 樂活能力：具備適應現代社會的學養以及就業能力。Employment opportunities: Capabilities of working on important policy and decision challenges in business and government                  |                             |                                 |  |
| F   | 溝通表達能力：思路清晰，有能力與人溝通並撰寫專業研究報告。Communication skills: Having a clear mind and capability in writing a professional academic report                                  |                             |                                 |  |
| 圖示說明 Illustration : ● 高度相關 Highly correlated ○ 中度相關 Moderately correlated   |  |                             |                                 |  |

授課進度表 Teaching Schedule & Content

| 週次Week | 內容 Subject/Topics                                    | 備註Remarks |
|--------|--|-----------|
| 1      | Introduction   |           |
| 2      | Stata Programmin                                     |           |
| 3      | Stata Programming                                    |           |
| 4      | Matrix Algebra                                       |           |
| 5      | Probability Theor                                    |           |
| 6      | Statistical Inference                                |           |
| 7      | Classical Multiple Linear Regression Model           |           |
| 8      | Classical Multiple Linear Regression Model           |           |
| 9      | 期中考試週 Midterm Exam                                   |           |
| 10     | Classical Multiple Linear Regression Model           |           |
| 11     | Classical Multiple Linear Regression Model           |           |
| 12     | Binary Variables in Regression and Structural Change |           |
| 13     | Binary Variables in Regression and Structural Change |           |
| 14     | Specification Tests and Model Selectio               |           |
| 15     | Instrumental Variable Estimation                     |           |
| 16     | Instrumental Variable Estimation                     |           |
| 17     | Nonspherical Disturbances                            |           |
| 18     | 期末考試週 Final Exam                                     |           |

教學策略 Teaching Strategies

- 課堂講授 Lecture
  分組討論 Group Discussion
  參觀實習 Field Trip
  其他 Miscellaneous:

學期成績計算及多元評量方式 Grading & Assessments

| 配分項目<br>Items                    | 配分比例<br>Percentage | 多元評量方式 Assessments |          |          |          |          |          |          |    |
|----------------------------------|--------------------|--------------------|----------|----------|----------|----------|----------|----------|----|
|                                  |                    | 測驗<br>會考           | 實作<br>觀察 | 口頭<br>發表 | 專題<br>研究 | 創作<br>展演 | 卷宗<br>評量 | 證照<br>檢定 | 其他 |
| 平時成績 General Performance         |                    |                    |          |          |          |          |          |          |    |
| 期中考成績 Midterm Exam               | 40%                |                    |          |          |          |          |          |          |    |
| 期末考成績 Final Exam                 | 40%                |                    |          |          |          |          |          |          |    |
| 作業成績 Homework and/or Assignments | 20%                |                    |          |          |          |          |          |          |    |
| 其他 Miscellaneous (_____)         |                    |                    |          |          |          |          |          |          |    |

評量方式補充說明  
Grading & Assessments Supplemental instructions

教科書與參考書目 (書名、作者、書局、代理商、說明)  
Textbook & Other References (Title, Author, Publisher, Agents, Remarks, etc.)

Greene, William H. (2012), {\em Econometric Analysis}, 7th edition, Prentice Hall, henceforth {\bf G}.  
(雙葉書局代理)  
\item 周賓鳳 (2010), 《計量經濟學：理論、觀念與應用》，智勝出版社。  
\item Davidson, R. and J. ~G. MacKinnon (2004), {\it Econometric Theory and Methods}, Oxford University Press,  
henceforth {\bf DM}. (新月書局代理)  
\item Heij, C., P. de Boer, P.H. Frases, T. Kloek, and H.K. van Dijk (2004), {\it Econometric Methods with Applications in Business and Economics}, Oxford University Press. (新月書局代理)  
\item Johnston, J. and J. DiNardo (1997), {\em Econometric Methods}, 4th edition, McGraw-Hill, henceforth {\bf JD}.  
(雙葉書局代理)  
\item Verbeek, Marno (2012), {\em A Guide to Modern Econometrics}, 4th edition, Wiley. (雙葉書局代理)

課程教材網址 (教師個人網址請列在本校內之網址)  
Teaching Aids & Teacher's Website (Personal website can be listed here.)

其他補充說明 (Supplemental instructions)