



## 教學計劃表 Syllabus

|                                    |                 |                             |                                 |                                    |      |
|------------------------------------|-----------------|-----------------------------|---------------------------------|------------------------------------|------|
| 課程名稱(中文)<br>Course Name in Chinese | 計量經濟學(一)        |                             | 學年/學期<br>Academic Year/Semester | 111/1                              |      |
| 課程名稱(英文)<br>Course Name in English | Econometrics(I) |                             |                                 |                                    |      |
| 科目代碼<br>Course Code                | EC_31700        | 系級<br>Department & Year     | 學二                              | 開課單位<br>Course-Offering Department | 經濟學系 |
| 修別<br>Type                         | 學程 Program      | 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               | /#統計學(二)        |                             |                                 |                                    |      |

### 課程描述 Course Description

This course is an introductory econometrics at the undergraduate level. This course aims at giving students basic understanding of econometrics theories and applying econometric techniques of regression analysis. Various econometric models are illustrated by practical examples based on concrete data to achieve this goal. We will cover the following topics: classical linear regression model, hypothesis testing, dummy variable regression, multicollinearity, and heteroscedasticity.

### 課程目標 Course Objectives

This course is an introductory econometrics at the undergraduate level. This course aims at giving students basic understanding of econometrics theories and applying econometric techniques of regression analysis. Various econometric models are illustrated by practical examples based on concrete data to achieve this goal. We will cover the following topics: classical linear regression model, hypothesis testing, dummy variable regression, and multicollinearity.

### 系專業能力

#### Basic Learning Outcomes

課程目標與系專業能力相關性  
Correlation between Course Objectives and Dept.'s Education Objectives

|   |   |   |
|---|---|---|
| A | 數理分析能力：應用數學與賽局理論分析與解決經濟議題的能力。Mathematical analysis skills: application of mathematical theories and game theory to analyze economic issues      |   |
| B | 實證經濟分析能力：善用資訊科技進行資訊蒐集、資料統計與計量分析。Empirical analysis skills: 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: 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: 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 | ● |

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 to econometrics         |            |
| 2       | Basics of probability and statistics |            |

|    |  |  |
|----|--|--|
| 3  | Basics of probability and statistics       |  |
| 4  | Two-variable regression model              |  |
| 5  | Two-variable regression model              |  |
| 6  | Two-variable regression model              |  |
| 7  | Two-variable regression model              |  |
| 8  | Two-variable regression model              |  |
| 9  | 期中考試週 Midterm Exam                         |  |
| 10 | Extension of two-variable regression model |  |
| 11 | Multiple regression model                  |  |
| 12 | Multiple regression model                  |  |
| 13 | Multiple regression model                  |  |
| 14 | Dummy variable regression model            |  |
| 15 | Dummy variable regression model            |  |
| 16 | Dummy variable regression model            |  |
| 17 | 期末考試週 Final Exam                           |  |
| 18 | 彈性教學                                       |  |

### 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: Computer Exercises

### 教學創新自評 Teaching Self-Evaluation

#### 創新教學(Innovative Teaching)

- 問題導向學習(PBL)
  團體合作學習(TBL)
  解決導向學習(SBL)  
 翻轉教室 Flipped Classroom
  磨課師 Moocs

#### 社會責任(Social Responsibility)

- 在地實踐 Community Practice
  產學合作 Industry-Academia Cooperation

#### 跨域合作(Transdisciplinary Projects)

- 跨界教學 Transdisciplinary Teaching
  跨院系教學 Inter-collegiate Teaching

- 業師合授 Courses Co-taught with Industry Practitioners

其它 other:

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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<br>Performance         |                    |                    |          |          |          |          |          |          |    |
| 期中考成績 Midterm Exam                  | 35%                | ✓                  |          |          |          |          |          |          |    |
| 期末考成績 Final Exam                    | 35%                | ✓                  |          |          |          |          |          |          |    |
| 作業成績 Homework and/or<br>Assignments |                    |                    |          |          |          |          |          |          |    |
| 其他 Miscellaneous<br>(平時考 (Quiz))    | 30%                | ✓                  |          |          |          |          |          |          |    |

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.)

Gujarati, D. N. and D. C. Porter (2009), Basic Econometrics, 5th edition, New York: McGraw-Hill. (華泰書局代理)

課程教材網址(含線上教學資訊, 教師個人網址請列位於本校內之網址)

Teaching Aids & Teacher's Website(Including online teaching information.

Personal website can be listed here.)

1. 課程相關訊息及補充教材將公佈在【東華e學苑】，請同學們自行登入查詢。
2. 東華e學苑網址：<http://www.elearn.ndhu.edu.tw/moodle/>

其他補充說明 (Supplemental instructions)