



## 教學計劃表 Syllabus

|   |                                     |                             |                                 |   |
|---|-------------------------------------|-----------------------------|---------------------------------|---|
| 課程名稱(中文)<br>Course Name in Chinese  | 計量經濟學(一)-迴歸分析                       |                             | 學年/學期<br>Academic Year/Semester | 104/1   |
| 課程名稱(英文)<br>Course Name in English  | Econometrics I -Regression analysis |                             |                                 |   |
| 科目代碼<br>Course Code   | BM_79700                            | 系級<br>Department & Year     | 博士                              | 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  | /林金龍                                |                             |                                 |   |
| 先修課程<br>Prerequisite  |                                     |                             |                                 |   |
| 課程描述 Course Description   |                                     |                             |                                 |   |
| <p>Econometric Analysis is the first-year graduate course in econometrics. The course aims at equipping the students with the knowledge for econometric theory and advanced empirical analysis, especially in the fields of finance and economics. Thus, the focus is placed upon methodology rather than proving statistical theorems. I adopt the book written by William H. Greene for its broad coverage and clear exposition.</p> <p>While students may have only limited exposure to econometrics, I shall allocate parts of the course on regression model specification and testing as is covered in Stock and Watson (2007). They are extremely useful in real empirical analysis.</p> |                                     |                             |                                 |   |
| 課程目標 Course Objectives  |                                     |                             |                                 |   |
| 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  |                                     |                             |                                 |   |
| 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   | 具備企業管理理論的核心專業知識                     |                             |                                 | ●   |
| B   | 具備邏輯思考與企業經營管理問題解決的能力                |                             |                                 | ●   |
| C   | 具備高階財務金融的分析能力                       |                             |                                 | ●   |
| D   | 具備高階企業財務管理專業能力                      |                             |                                 | ●   |
| E   | 具備英語閱讀溝通協調及教學之能力                    |                             |                                 | ○   |
| F   | 具備前瞻開創新興議題之能力                       |                             |                                 | ○   |
| G   | 具備金融創新之能力                           |                             |                                 | ○   |
| 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 of econometrics and R (chap 1)                                    |  |
| 2  | Linear regression model and least squares (Chaps. 2,3                          |  |
| 3  | Statistical properties of the least squares estimator (chap 4)                 |  |
| 4  | Inference and prediction (chap 5)  |  |
| 5  | Functional form and structural change (chap 6)                                 |  |
| 6  | Specification analysis and model selection (I) ( Stock and Watson, chaps 7,9)  |  |
| 7  | Specification analysis and model selection (II) ( Stock and Watson, chaps 7,9) |  |
| 8  | Generalized regression model (chap 8)  |  |
| 9  | 期中考試週 Midterm Exam   |  |
| 10 | Instrumental variables estimation (chap 12)                                    |  |
| 11 | panel data (I) (chap 5)  |  |
| 12 | panel data (II) (chap 5)   |  |
| 13 | Model for discrete choice (I) (Chap 23)  |  |
| 14 | Model for discrete choice (II) (Chap 23)                                       |  |
| 15 | Series correlation; model with lagged variables (chaps 19,20                   |  |
| 16 | Time series models (chap. 21)  |  |
| 17 | Maximum likelihood estimation (chap. 16)                                       |  |
| 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: term paper

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               | 30%                | ✓                  |          |          |          |          |          |          |    |
| 期末考成績 Final Exam                 |                    |                    |          |          |          |          |          |          |    |
| 作業成績 Homework and/or Assignments | 30%                |                    |          |          |          |          |          |          |    |
| 其他 Miscellaneous (term paper)    | 40%                |                    |          |          | ✓        |          |          |          |    |

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.)

William H. Greene, *Econometric Analysis*, 7th ed., 2012 New Jersey: Prentice Hall

James H. Stock and Mark Watson, *Introduction to Econometrics*, updated 3rd edition, Boston: Addison-Wesley, 2015

Bruce E. Hansen, *Econometrics*, available at  
<http://www.ssc.wisc.edu/~bhansen/econometrics/Econometrics.pdf>

Grant V. Farnsworth (2008) *Econometrics in R*. PDF and a browsable HTML version files are available at [www.r-project.org](http://www.r-project.org)

Christian Kleiber and Achim Zeileis, *Applied Econometrics with R*, Springer, 2008

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.)

[faculty.ndhu.edu.tw/~jlin](http://faculty.ndhu.edu.tw/~jlin)

其他補充說明 (Supplemental instructions)