國立東華大學

# 教學計劃表 Syllabus

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| 課程名稱(中文) Course Name in Chinese | 計量經濟學AA | | | 學年/學期 Academic Year/Semester | 106/1 |
| 課程名稱(英文) Course Name in English | Econometrics | | | | |
| 科目代碼 Course Code | FIN_5010AA | 系級 Department & Year | 碩士 | 開課單位 Course-Offering Department | 財務金融學系 |
| 修別 Type | 必修 Required | 學分數/時間 Credit(s)/Hour(s) | 3.0/3.0 | | |
| 授課教師 Instructor | /林金龍 | | | | |
| 先修課程 Prerequisite | | | | | |

## 課程描述 Course Description

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.

While students may have only limited exposure to econometrics, I shall allocate parts of the course on regression mode specification and testing as is covered in Stock and Watson (2007). They are extremely useful in real empirical analysis.

## 課程目標 Course Objectives

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) | |

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|---|---|---|
| 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

- [x] 課堂講授 Lecture
- [ ] 分組討論Group Discussion
- [ ] 參觀實習 Field Trip
- [x] 其他Miscellaneous: term paper

## 學期成績計算及多元評量方式 Grading & Assessments

| 配分項目 Items | 配分比例 Percentage | 多元評量方式 Assessments | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 測驗會考 | 實作觀察 | 口頭發表 | 專題研究 | 創作展演 | 卷宗評量 | 證照檢定 | 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

Francis X Diebold (2017) Econometrics and Predictive Modeling, available at http://www.ssc.upenn.edu/˜fdiebold/Teaching104/Econometrics.pdf

Grant V. Farnsworth (2008) Econometrics in R. PDF and a browsable HTML version files are available at 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）<br>Teaching Aids & Teacher's Website (Personal website can be listed here.) |
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| faculty.ndhu.edu.tw/~jlin |

| 其他補充說明（Supplemental instructions） |
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