



## 教學計劃表 Syllabus

課程名稱(中文) Course Name in Chinese	計量經濟分析(四)		學年/學期 Academic Year/Semester	102/1
課程名稱(英文) Course Name in English	Econometric Analysis(IV)			
科目代碼 Course Code	EC__76250	系級 Department & Year	博士	開課單位 Course-Offering Department
修別 Type	選修 Elective	學分數/時間 Credit(s)/Hour(s)	3.0/3.0	
授課教師 Instructor	/陳建福			
先修課程 Prerequisite				
課程描述 Course Description				
<p>This aim of this course is to provide the student a solid foundation of <b>advanced time series models</b> that are currently being used in the empirical finance and macroeconomics. The course covers threshold autoregression model, smooth transition model, nonlinear unit root tests, threshold cointegration, structural change model, nonlinear cointegration, multivariable GARCH model, and panel smooth transition model.</p>				
課程目標 Course Objectives				
建立學生從事進階經濟學實證研究之基礎				
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：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 profound ability in presenting professional academic research			●
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	Univariate GARCH Model	
3	Univariate GARCH Model	
4	Threshold Model	
5	Threshold Model	
6	Threshold Model	
7	Nonlinear Unit Roots Test	
8	Nonlinear Unit Roots Test	
9	期中考試週 Midterm Exam	
10	Cointegration with Structural Change	
11	Cointegration with Structural Change	
12	Cointegration with Structural Chang	
13	Nonlinear Cointegration	
14	Nonlinear Cointegration	
15	Multivariate Conditional Heteroscedastic Model	
16	Multivariate Conditional Heteroscedastic Model	
17	Multivariate Conditional Heteroscedastic Models	
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 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									
期末考成績 Final Exam									
作業成績 Homework and/or Assignments									
其他 Miscellaneous (Classroom presentation & term paper)	100%								

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.)

There is no single textbook for the course but the following references are useful.

- `\begin{enumerate}`  
`\item` Brooks, Chris (2002), `{\em` Introductory Econometrics for Finance`}`, Cambridge University Press. (新月書局代理)  
`\item` Enders, W. (2010), `{\em` Applied Econometric Time Series`}`, 3rd Edition, Wiley. (雙葉書局代理)  
`\item` Franses, Philip Hans and Dick van Dijk (2000), `{\em` Nonlinear Time Series Models in Empirical Finance`}`, UK: Cambridge University Press.  
`\item` Hamilton, J.~D. (1994), `{\em` Time Series Analysis`}`, NJ: Princeton University Press.  
`\item` Tsay, Ruey S. (2010), `{\em` Analysis of Financial Time Series`}`, 3rd edition, Wiley. (新月書局代理)  
`\end{enumerate}`

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)