



課 綱 Course Outline  
經濟學系博士班

中文課程名稱 Course Name in Chinese	時間序列分析				
英文課程名稱 Course Name in English	Time Series Analysis				
科目代碼 Course Code	EC__71200	班 別 Degree	博士班 Ph. D.		
修別 Type	選修 Elective	學分數 Credit(s)	3.0	時 數 Hour(s)	3.0
先修課程 Prerequisite	none				
課程目標 Course Objectives					
本課程主要是介紹計量時間序列方法，課程目標是建立學生有關總體經濟或財務時間序列分析的研究基礎，以便從事總體經濟實證或財務經濟學的實證分析					
課程大綱 Course Outline					
1、Univariate Time Series (1) ARIMA processes (2) Wold's decomposition (3) Box-Jenkins approach 2、Unit Root Tests (1) Properties of $I(1)$ v. s. $I(0)$ (2) Augmented Dickey-Fuller test, Phillips-Perron test, and KPSS test, (3) Structural breaks and unit root tests 3、Vector Autoregressive Models (VAR) (1) Estimation and Specification of VAR (2) Granger causality (3) Impulse response function 4、Cointegration (1) Granger representation theorem (2) Engle-Granger approach (3) Johansen approach 5、Conditional Heteroscedastic Models (1) Testing for ARCH effect: Engle's LM test (2) GARCH, IGARCH, E-GARCH, and Threshold GARCH processes (3) Maximum likelihood estimation of GARCH models					
資源需求評估 (師資專長之聘任、儀器設備的配合...等) Resources Required (e.g. qualifications and expertise, instrument and equipment, etc.)					
課程要求和教學方式之建議 Course Requirements and Suggested Teaching Methods					

本課程以講授方式進行，輔以課堂討論。

其他  
Miscellaneous