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國立東華大學

教學計劃表 Syllabus

課程名稱(中文) Course Name in Chinese	計量經濟學(一)-迴歸分析			學年/學期 Academic Year/Semester	109/2
課程名稱(英文) Course Name in English	Econometrics I - Regression analysis				
科目代碼 Course Code	FIN_M0020	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 books written by William H. Greene as the textbook for its broad coverage and clear exposition as well as Christian Kleiber and Achim Zeileis's Applied Econometrics with R
which is excellent for practitioners.

I shall allocate parts of the course on regression mode specification and testing as is covered in Stock and Watson (2015). They are extremely useful in real empirical analysis.
In addition, I also include some chapters of the lecture notes written by Bruce Hansen, which is an excellent textbook for graduate econometrics.

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

The students must have the ability of training econometrics, according to economic theory to analysis empirical and forecast.

	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	具備財務金融的分析能力Understanding the financial analysis.	●
B	具備企業財務管理專業能力Capabilities for business financial management.	●
C	具備英語閱讀溝通協調等能力English reading ability of communication and coordination.	●
D	具備獨立研究之技能，以進行財金議題研究Independent research skills to research financial issues.	●
E	具備個人投資理財能力Investment and financial management.	○
F	具備電腦程式運算及設計能力Ability of computer programs, algorithms and application.	●

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
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 Industy-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:

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

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.)

faculty.ndhu.edu.tw/~jlin

其他補充說明 (Supplemental instructions)