



教學計劃表 Syllabus

課程名稱(中文) Course Name in Chinese	投資組合管理		學年/學期 Academic Year/Semester	114/2	
課程名稱(英文) Course Name in English	Portfolio Management				
科目代碼 Course Code	FIN_50500	系級 Department & Year	碩士	開課單位 Course-Offering Department	財務金融學系
修別 Type	選修 Elective	學分數/時間 Credit(s)/Hour(s)	3.0/3.0		
授課教師 Instructor	/李同蘇				
先修課程 Prerequisite					
課程描述 Course Description					
<p>This class intends to lay a solid quantitative foundation for students in portfolio management. This class does not guarantee any success in investment in any stock markets after completion of this course. Instead, by taking this class, we hope students will be able to have a good judgment in selecting investment vehicles to avoid any unnecessary losses. Portfolio management process is a complicate process. Anything beyond the textbook and lecture are helpful. Broadening your scope of intaking of any information beyond the investment will be a plus for investment decision-making. Therefore, the outside class readings are as equally important as the textbook and lecture.</p>					
課程目標 Course Objectives					
<p>本課程一方面介紹建構投資組合之理論基礎及證券分析，並藉著不同證券的相互搭配，來了解投資組合的管理方式及評價。另一方面藉由文獻討論增進研究能力及相關議題的探討。</p>					
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			●	
B	具備企業財務管理專業能力			●	
C	具備英語閱讀溝通協調等能力			●	
D	具備獨立研究之技能，以進行財金議題研究			●	
E	具備個人投資理財能力			○	
F	具備電腦程式運算及設計能力				
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 to Python				
2	Introduction to Pandas and dealing with financial data				
3	Financial time series data				

4	Machine learning in time series forecasting	
5	Returns and the Gaussian Hypothesis	
6	Utility functions and the theory of choice	
7	Markowitz without risk-free asset	
8	Markowitz with risk-free asset	
9	期中考試週 Midterm Exam	
10	Risk measures and capital allocation	
11	Factor models, I	
12	Factor models, II	
13	Modeling volatility with GARCH class models	
14	Monte Carlo simulations in portfolio management	
15	Asset allocation and back testing I	
16	Back testing II	
17	Final Exam and final project presentation	
18		

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:

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 Industry-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(含出缺席) General Performance (Attendance Record)	10%		✓						
期中考成績 Midterm Exam	30%	✓							
期末考成績 Final Exam	30%	✓							
作業成績 Homework and/or Assignments	10%		✓						
其他 Miscellaneous (期末報告)	20%		✓	✓					

評量方式補充說明

Grading & Assessments Supplemental instructions

Class etiquette: Experience indicates that students with regular attendance of class have higher grades than those who did not. Followings are basic class etiquette. Turn off your mobile phone before class. No loud chatting allowed in the class. Having food or drink in the class is not encouraged. Any irrational behavior in the class will not be tolerated. Any violation of the class etiquette will be penalized by reduction in your grade

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.)

Quantitative Portfolio Management with application in Python, Pierre Brugiére, Springer, 2020
Other supplemental material in class.

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.)

其他補充說明 (Supplemental instructions)