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②國玄東華大學

教學計劃表 Syllabus

| 課程名稱(中文) Course Name in Chinese | 衍生性金融商品 | | | | 學年/學期 Academic Year/Se | 113/1 | | |
|------------------------------------|-------------|-------------------------------|--|---------------------------------------|---------------------------|-------|--|--|
| 課程名稱(英文) Course Name in English | Derivatives | | | , | | | | |
| 科目代碼 Course Code | IMM0080 | 系級 Department 碩士 & Year | | 開課單位 Course-Offering Department | 資訊管理學系 | | | |
| 修別 Type | 選修 Elective | 學分數/時間 Credit(s)/Hour(s) | | | 3.0/3.0 | | | |
| 授課教師 Instructor | /呂進瑞 | | | | | | | |
| 先修課程 Prerequisite | | | | | | | | |
| 課程描述 Course Description | | | | | | | | |

This course offers numerous analyses, studies, and discussions regarding options markets, futures markets, new financial tools, and financial risk management. We discuss how investors invest in the derivatives markets. I hope the learners can know these financial tools' properties, pricing, applications, hedging, and trading strategies.

課程目標 Course Objectives

The purpose of this course is to extend the student's knowledge of security valuation by examining the structure, valuation, and uses of derivative contracts

| | 条專業能力 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 | 培育具備創造與思考能力、服務精神、團隊合作以及國際觀Nurture ability regarding creativity and thinking, spirit of service, teamwork and international view | • |
| В | 培養具備資訊專業知識與技能Nurture professional ability and skill regarding information | |
| С | 培養具備資訊科技與管理領域之知識整合應用能力Nurture integrated ability regarding information technology and management | |
| D | 培養具備解決問題之資訊剖析、組織、整合、應用以及表達的能力Nurture ability of information analysis, organization, integration, application, and expression regarding problem solving | 0 |
| Е | 培養具備獨立研究、領導智能與資訊創新的能力Nurture ability regarding independent research, leadership and information innovation | 0 |

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 derivatives | |
| 2 | Option contracts and markets | |
| 3 | Option contracts and markets | |
| 4 | Option trading strategies | |
| 5 | Option valuation | |

| Binomial model of derivatives pricings Greek Letters and risk managements Creek Letters and risk managements Applications on the markets Futures pricing Binomial model of derivatives pricings Applications Applications in options Applications in options Binomial model of derivatives managements Applications Applications in options Applications in options Binomial model Applications Applications in options Applications in options Binomial model Applications Applications in options Binomial model Applications Applications Applications in options Binomial markets Binomial ma | | | | | | | |
|---|---|--|------------|--|--|--|--|
| 8 Black-Scholes pricing model 9 期中考試週 Midterm Exam 10 Black-Scholes pricing model 11 Greek Letters and risk managements 12 Greek Letters and risk managements 13 Forward contracts 14 Futures contracts and markets 15 Futures pricing 16 Hedging using futures 17 Applications in options 18 期末考試週 Final Exam ** 数學 策略 Teaching Strategies ** 以读堂講授 Lecture 其他Miscellaneous: 数學 創 新自 | 6 | Binomial model of derivatives pricings | | | | | |
| 9 期中考試週 Midterm Exam 10 Black-Scholes pricing model 11 Greek Letters and risk managements 12 Greek Letters and risk managements 13 Forward contracts 14 Futures contracts and markets 15 Futures pricing 16 Hedging using futures 17 Applications in options 18 期末考試週 Final Exam 数學 策略 Teaching Strategies 文字質技 Lecture 文分組対論Group Discussion 李載實習 Field Trip 其他Miscellaneous: 数學 動 新 自 译 Teaching Self-Evaluation 動新教學(Innovative Teaching) 財態等句學習(PBL) 関態合作學習(TBL) 財態等句學習(SBL) 動轉教室 Flipped Classroom 身張壽和 Moocs 社會責任(Social Responsibility) 查也實踐Community Practice 達學合作 Industy-Academia Cooperation 時界教學Transdisciplinary Projects) 時界教學Transdisciplinary Teaching | 7 | 7 Binomial model of derivatives pricings | | | | | |
| 10 Black-Scholes pricing model 11 Greek Letters and risk managements 12 Greek Letters and risk managements 13 Forward contracts 14 Futures contracts and markets 15 Futures pricing 16 Iledging using futures 17 Applications in options 18 期末考試選 Final Exam *** 数學 策略 Teaching Strategies *** □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ | 8 | Black-Scholes pricing model | | | | | |
| 11 Greek Letters and risk managements 12 Greek Letters and risk managements 13 Forward contracts 14 Futures contracts and markets 15 Futures pricing 16 Hedging using futures 17 Applications in options 18 期末考試週 Final Exam *** 数學 策略 Teaching Strategies ** 」 | 9 | 期中考試週 Midterm Exam | | | | | |
| 12 Greek Letters and risk managements 13 Forward contracts 14 Futures contracts and markets 15 Futures pricing 16 Hedging using futures 17 Applications in options 18 期末考試週 Final Exam | 10 | Black-Scholes pricing model | | | | | |
| 13 Forward contracts 14 Futures contracts and markets 15 Futures pricing 16 Hedging using futures 17 Applications in options 18 期末考試週 Final Exam | 11 | Greek Letters and risk managements | | | | | |
| 14 Futures contracts and markets 15 Futures pricing 16 Hedging using futures 17 Applications in options 18 期末考試理 Final Exam *** 数學 第 | 12 | Greek Letters and risk managements | | | | | |
| 15 Futures pricing 16 Hedging using futures 17 Applications in options 18 期末考試週 Final Exam 数學策略 Teaching Strategies | 13 | Forward contracts | | | | | |
| 16 Hedging using futures 17 Applications in options 18 期末考試週 Final Exam 数學 策略 Teaching Strategies □ 課堂講授 Lecture □ 分組討論Group Discussion 李觀實習 Field Trip 其他Miscellaneous: 数學 創新自評 Teaching Self-Evaluation 割新教學(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 唐課師 Moocs 上倉責任(Social Responsibility) □ 在地實踐Community Practice 直達學合作 Industy-Academia Cooperation 跨城合作(Transdisciplinary Projects) 時界教學Transdisciplinary Teaching 」跨院系教學Inter-collegiate Teaching 工作の表表表表表表表表表表表表表表表表表表表表表表表表表表表表表表表表表表表表 | 14 | Futures contracts and markets | | | | | |
| Applications in options 18 | 15 | Futures pricing | | | | | |
| 数學策略 Teaching Strategies 数學創新自評 Teaching Self-Evaluation 李観賞習 Field Trip 其他Miscellaneous: 数學創新自評 Teaching Self-Evaluation 創新教學(Innovative Teaching) 別題等向學習(PBL) 国體合作學習(TBL) 解決等向學習(SBL) 翻轉教室 Flipped Classroom 唐課師 Moocs 社會責任(Social Responsibility) 在地質獎Community Practice 産學合作 Industy-Academia Cooperation 跨域合作(Transdisciplinary Projects) 跨界教學Transdisciplinary Teaching 野院系教學Inter-collegiate Teaching 業師合授 Courses Co-taught with Industry Practitioners | 16 | Hedging using futures | | | | | |
| 教學策略 Teaching Strategies ✓ 課堂講授 Lecture | 17 | Applications in options | | | | | |
| ▼課堂講授 Lecture ▼分組討論Group Discussion 李觀實習 Field Trip 其他Miscellaneous: 数學創新自評 Teaching Self-Evaluation 創新教學(Innovative Teaching) 團體合作學習(TBL) 解決導向學習(SBL) 翻轉教室 Flipped Classroom 唐課師 Moocs | 18 | 期末考試週 Final Exam | | | | | |
| 其他Miscellaneous: 数學創新自評 Teaching Self-Evaluation | | 教 學 策 略 Teaching Strategies | | | | | |
| 数學創新自評 Teaching Self-Evaluation 創新教學(Innovative Teaching) ✓ 問題導向學習(PBL) → 翻轉教室 Flipped Classroom → 企場責任(Social Responsibility) → 在地實踐Community Practice → 企學合作 Industy-Academia Cooperation → 跨域合作(Transdisciplinary Projects) → 跨界教學Transdisciplinary Teaching → 一 等院系教學Inter-collegiate Teaching → 業師合授 Courses Co-taught with Industry Practitioners | ✓ 課堂講 | 授 Lecture | Field Trip | | | | |
| 創新教學(Innovative Teaching) 図題導向學習(PBL) | 其他Mis | scellaneous: | | | | | |
| ▼ 問題導向學習(PBL) | | 教 學 創 新 自 評 Teaching Self-Evaluation | | | | | |
| ■ 翻轉教室 Flipped Classroom | 創新教學(| Innovative Teaching) | | | | | |
| 社會責任(Social Responsibility) 【 在地實踐Community Practice | ✓ 問題導 | 向學習(PBL) 團體合作學習(TBL) ✓ 解決導向學 | 로컬(SBL) | | | | |
| □ 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 | 翻轉教室 Flipped Classroom | | | | | | |
| 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 | 社會責任(Social Responsibility) | | | | | | |
| | 在地實踐Community Practice | | | | | | |
| □ 業師合授 Courses Co-taught with Industry Practitioners | 跨域合作(Transdisciplinary Projects) | | | | | | |
| | 一 跨界教學Transdisciplinary Teaching 跨院系教學Inter-collegiate Teaching | | | | | | |
| 其它 other: | 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 | 配分比例 | 多元評量方式 Assessments | | | | | | | |
| Items | Percentage | 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 | 10% | | ~ | ~ | | | | | class performances |
| 期中考成績 Midterm Exam | 30% | ~ | | | | | | | |
| 期末考成績 Final Exam | 30% | ~ | | | | | | | |
| 作業成績 Homework and/or Assignments | 30% | | | ~ | | | | | |
| 其他 Miscellaneous | | | | | | | | | quizs and presentation |

評量方式補充說明

Grading & Assessments Supplemental instructions

Google Meet: https://meet.google.com/yft-jypf-rho

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.)

No textbooks. Course PPTs are uploaded in NDHU e-learning system before the course days. You should download PPTs, print them, and take them to the classes.

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.)

Google Meet: https://meet.google.com/yft-jypf-rho

NDHU e-learning

其他補充說明(Supplemental instructions)