國立東華大學
教學計劃表　Syllabus

課程名稱(中文) Course Name in Chinese	統計學(二)			學年/學期 Academic Year/Semester		112/2
課程名稱(英文) Course Name in English	Statistics(II)					
科目代碼 Course Code	FIN_B0110	系級 Department & Year	學二	開課單位 Course-Offering Department		財務金融學系
修別 Type	學程 Program	學分數/時間 Credit(s)/Hour(s)		3.0/3.0		
授課教師 Instructor	/黃瑞卿					
先修課程 Prerequisite						

課程描述　Course Description

Statistics is concerned with mathematical methods for collecting, summarizing, presenting, and analyzing data. This course introduces and explains the statistical methods and tools. Some mathematical techniques and empirical methods for the analysis and application of business data are concerned. Emphasis of this course is on the understanding and applications of statistical tests, type errors, the chi-square test, curve fitting, regression analysis, correlation analysis, analysis of variance, and non-parametric tests.
The materials of the FRM Exam are also included in the course. The students will confidently attend the FRM Exam.

課程目標　Course Objectives

Statistics is concerned with mathematical methods for collecting, summarizing, presenting, and analyzing data. This course introduces and explains the statistical methods and tools. Some mathematical techniques and empirical methods for the analysis and application of business data are concerned. Emphasis of this course is on the understanding and applications of statistical tests, type errors, the chi-square test, curve fitting, regression analysis, correlation analysis, analysis of variance, and non-parametric tests.

	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	具備經濟學、會計學、統計學及數學的基礎能力Basic knowledge of the financial theory Economics, accounting,statistical and mathematical ability.	●
B	具備財務金融基本學理Understanding of the development of the financial disciplinal.	○
C	具備運用財務金融學理進行分析能力Basic knowledge of financial theory analysis.	●
D	具備資料整理、書面呈現或口頭報告之能力Basic knowledge of documentation and presentation skills.	●
E	具備財經時事基本分析能力Capabilities for financial analysis of current affairs	
F	具備電腦程式運算及應用基本能力Ability of computer programs, algorithms and applications	●
G	具備英語閱讀溝通協調等基本能力English reading ability of communication and coordination	○

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	Chapter 8 Sampling Distribution and the Central Limit Theorem	
2	Chapter 8 Sampling Distribution and the Central Limit Theorem Chapter 9 Estimation and confidence intervals	
3	First examination Chapter 9 Estimation and confidence intervals	
4	Chapter 9 Estimation and confidence intervals	
5	Second examination Chapter 10 One Sample Tests of Hypothesis	
6	Chapter 10 One Sample Tests of Hypothesis	
7	Chapter 10 One Sample Tests of Hypothesis Chapter 11 Two-sample tests of hypothesis	
8	Holiday	
9	Third examination Chapter 11 Two-sample tests of hypothesis	
10	Chapter 11 Two-sample tests of hypothesis	
11	Fourth examination Chapter 12 Analysis of variance	
12	Chapter 12 Analysis of variance	
13	Fifth examination Chapter 13 Correlation and linear regression	
14	Chapter 13 Correlation and linear regression	
15	Sixth examination Chapter 17 Nonparametric methods : Goodness-of-fit tests	
16	Chapter 17 Nonparametric methods : Goodness-of-fit tests	
17	Holiday	
18	Seventh examination	

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: <u>Question and Answer</u>
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: Financial Risk Manager（FRM）test practice

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	80%	✓							There are seven tests in this course.
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 performance)	20%								

評量方式補充說明
Grading & Assessments Supplemental instructions

1. The final grade may be adjusted by the university's rule.
2. There are seven tests in this course.
3. Total score in each test is 120 points.
4. The average of these seven test scores is the general performance and it occupies 80% of final score.
5. The classroom performance includes reading examples or questions, attending on time, and answering questions etc.
6. If the students are cheaters, they will get E rank in the transcript.

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.)

1. Lind,D.A., Marchal, W.G., and Wathen, S.A. Statistical Techniques in Business & Economics.（華泰代理）
2. Microsoft Office Excel
3. Teaching materials

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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.)

https://elearn4.ndhu.edu.tw/moodle/(東華e學苑 NEW)
Online class link: https://meet.google.com/kau-sxeo-nkj

其他補充說明 (Supplemental instructions)

AACSB information: College Mission, Learning Goals, and Learning Objectives College Mission The College of Management (COM) emphasizes internationalization, education, and localization, which shapes its mission to cultivate outstanding management and academic talents who are aware of the impact of globalization and ethical issues and can integrate a diversity of knowledge and possess the analytical decision-making and execution abilities to build a brighter future. Students can achieve the five learning goals derived from the school mission, including LGI -integration of a diversity of business and management knowledge, LG2-analytical decision-making ability, LG3execution, LG4-global vision, and LG5-ethics.

This course covers essential topics of statistical techniques and analytical skills in the business field to help undergraduate students achieve LG2, which is measured by the LO 2.1 and LO 2.2.

Learning Goal (LG2): Analytical decision-making ability
Learning Objectives (LOS): 2.1 Equipped with the ability of logical thinking; 2.2 Equipped with the ability of data analysis
Measurement: To achieve the above goals, statistical concepts and methods will be introduced, and selected examples & analysis exercises are also chosen as supplementary materials to help students' learning process of applying statistical knowledge. Students need to absorb and answer questions in the class based on their understanding, as well as finish assignments/quizzes and pass examinations to fulfill the course requirements.
The following rubrics will be used to evaluate the students by the tests and examinations for the intended learning objectives of AOL.

LO 2.1 -Equipped with the ability of logical thinking
Needs Improvement: Little evidence of cohesive thinking and ideas seem scrambled or disconnected
Satisfactory: Ideas organized with some clarity for barely logical argument Exemplary: Ideas are well -organized to formulate a logical argument

LO 2.2-Equipped with the ability of data analysis
Needs Improvement: Most of statistical techniques and analytical skills are not complete and presented
Satisfactory: Most of statistical techniques and analytical skills are well processed and presented
Exemplary: Correctly perform statistical techniques and analytical skills