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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	統計學(一)AB				學年/學期 Academic Year/Semester		104/1	
課程名稱(英文) Course Name in English	Statistics (I)						
科目代碼 Course Code	IB2140AB	系級 Department 學二 & Year		開課單位 Course-Offering Department	資訊管理學系			
修別 Type	學程 Program	學分數/時間 Credit(s)/Hour(s)			3.0/3.0			
授課教師 Instructor	/林金龍							
先修課程 Prerequisite								

課程描述 Course Description

H. G. Wells, an English author and historian, predicted over 100 years ago that quantitative reasoning will be as necessary

for effective citizenship as the ability to read. He could not have been more correct especially for students

in business and economics today who need to acquire the knowledge to organize, analyze, extract and then transform data to present the information. These basic statistical skills and methods are essential for making proper business and personal decisions.

This course is the first semester of a one-year undergraduate statistics. It aims at equipping the students with

the ability to describe data sets using graphs and numerical summaries, to use probability rules in problem solving, to

supply inferential statistical techniques in decision making for business and real life situations. Topics studied include descriptive measures for empirical data, theory of probability, probability distributions,

sampling distributions of statistics from large and small samples, estimation theory, hypothesis testing, correlation,

and regression.

One can never really master statistics without getting his/her hand dirty with real data. Analyzing real data using some statistical package is considered as an essential part of this course. I shall give empirical data analysis during the lectures and assign computer-related home work. For this purpose, I shall teach and ask students to learn and use R, a powerful statistical and yet free package. It can be downloaded from

http://www.r-project.org

課程目標 Course Objectives

介紹統計推論的概念與各種統計分析方法,引導學生了解統計學在管理決策等方面之應用

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	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										
В		情財務金融基本學理Understanding of the development of the financial discipline									
С	具備運	運用財務金融學理進行分析能力Basic knowledge of financial theory analysi								•	
D		上備資料整理、書面呈現或口頭報告之能力Basic knowledge of documentation and resentation skill									
Е											
F	■ 具供電腦投式運管及應用其未能力Ability of computer programs, algorithms and										
G	具備英	語閱讀溝通協調等基	基本能力English	reading	ability	of comm	nunicatio	on and			
	G coordination coordination : ● 高度相關 Highly correlated ○中度相關 Moderately correlated										
国 //··		- Tuoti ution									Idited
授課進度表 Teaching Schedule & Content 週次Week 内容 Subject/Topics										備註Remarks	
	week 1	Introduction to			ect/10p1	ics				ĺ	用 a主Relliai KS
		Introduction to Describing data			requenc	ev distr	ibution	s and			
	2	graphic present									
· ·	3	Describing data	: numerical m	easure							
4	4 Describing data: displaying and exploring data										
	5 A survey of probability concepts (1/2)										
(3	A survey of probability concepts (2/2)									
7	7 Discrete probability distributions (1/2)										
8	Discrete probability distributions (2/2)										
(9 期中考試週 Midterm Exam										
1	Sampling methods and the central limit theorem (1/2)										
1	Sampling methods and the central limit theorem (2/2)										
1	12 Estimation and confidence intervals (1/2)										
1	13 Estimation and confidence intervals (2/2)										
1	4 One-sample tests of hypothesis (1/2)										
1	5	One-sample tests of hypothesis (2/2)									
1	6	Two-sample tests of hypothesis (1/2									
1	7	Two-sample tests of hypothesis (2/2)									
1	18 期末考試週 Final Exam										
			教	學策	略 Tea	aching (Strategi	ies			
✓ å	课堂講	授 Lecture		分組討	論Group	Discuss	sion	多	觀實習]	Field T	rip
✓ 其他Miscellaneous: <u>分析實際統計資料</u>											
學期成績計算及多元評量方式 Grading & Assessments											
		分項目	配分比例	測驗	實作	口頭	多元評量 專題	量方式 A 創作	SSESSMEI 卷宗	nts 證照	
亚 n+ 1		Items	Percentage	魚殿 會考	觀察	發表	研究	展演	· 苍示 評量	檢定	其他
Gener	al Per	出缺席) formance									
(Atte	ndance	e Record)									

期中考成績 Midterm Exam	30%	~				
期末考成績 Final Exam	40%	~				
作業成績 Homework and/or Assignments	30%		~			含上課出席率
其他 Miscellaneous ()						

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.)

Textbook:

D. A. Lind, W. G. Marchal and S. A. Wathen (2014),

Statistical Techniques in Business and Economics, 16th ed. New York: McGraw Hill (Imported by Hwa Tai Publishing)

Reference books:

Daniel Navarro (2014), Learning Statistics with R: A tutorial for psychology students and other beginners

(Version 0.4) available at :\\

http://health.adelaide.edu.au/psychology/ccs/teaching/lsr/

Darrell Huff (1954), How to lie with statistics, New York: W.W. Norton & Company

課程教材網址(教師個人網址請列在本校內之網址)

Teaching Aids & Teacher's Website (Personal website can be listed here.)

faculty.ndhu.edu.tw/~jlin

其他補充說明(Supplem	ental instructions`	١