



課 綱 Course Outline

通識教育中心學士班

中文課程名稱 Course Name in Chinese	資料分析入門				
英文課程名稱 Course Name in English	Prelude to Data Analysis				
科目代碼 Course Code	GC__63860	班 別 Degree	學士班 Bachelor' s		
修別 Type	選修 Elective	學分數 Credit(s)	3. 0	時 數 Hour(s)	3. 0
先修課程 Prerequisite					
課程目標 Course Objectives					
簡介資料分析在處理真實世界問題的角色，讓學生對資料分析的架構、角色以及其技術與理論要求有一個概略的瞭解，進而使學生瞭解後續相關課程的關連性，並觸發學習動機。					
This course will be served as a non-technical first course for students who are interested in statistics and data analysis. Objectives					
1. Overview of data analysis: Problems-solving, techniques/coding					
2. Theoretical framework of data analysis: Probability, Statistics, etc.					
Motivating and preview of some related topics and courses.					
(校)教育目標 Objectives of General Education					
1	在地關懷與全球視野 Develop domestic and global perspectives				
2	人文素養與科學知識 Achieve humanistic values and scientific literacy				
3	全人健康與永續創新 Holistic Wellness and Sustainable Innovation				
(校)核心能力 Learning Outcomes				課程目標與校核心能力相關性 Correlation between Course Objectives and Basic Learning Outcomes	
A	自主學習與創新思考 Autonomous Learning and Creative Thinking				●
B	康健身心 Physical Fitness and Mental Balance				

C	互動、溝通與解決問題 Interactive Communication and Problem Solving	○
D	情藝美感 Artistic Feeling and Aesthetic Perception	
E	文化素養與尊重差異 Cultural Literacy and Respect for Differences	○
F	在地關懷與公民責任 Local Commitment and Civic Responsibility	○

圖示說明Illustration：● 高度相關 Highly correlated ○ 中度相關 Moderately correlated

課程大綱 Course Outline

課程大綱：由於本課程並不假設學生具備微積分或統計的背景知識，因此規劃以主題或故事，以一到兩週課程時間為單位，由本系教師或相關領域研究者介紹該主題內容。另外，為使提高學生的學習動機及參與，規劃在期中或期末分組報告。可能的主題與故事如：資料採礦/啤酒與尿布；小資料—大資料：資料分析的過去、現在與未來；一張圖勝過千萬字？統計圖表導讀等。

Course Outline: This course does not assume calculus and statistics background. Rather, the course will consist of units (one-two weeks) of topics/stories. For better motivation and participation, the students will be divided into teams for mini projects and presentations. Some possible topics/stories: Data mining: Beer and diapers; Small data-Big Data, Statistical graphs, etc.

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資源需求評估（師資專長之聘任、儀器設備的配合．．．等）
Resources Required (e.g. qualifications and expertise, instrument and equipment, etc.)

要以本系機率統計教師主導、組織教學，並在資源/人力安排可能下輔以數次主題演講。
Resources Required (e.g. qualifications and expertise, instrument and equipment, etc.):

Faculty members with expertise in probability and statistics

課程要求和教學方式之建議 Course Requirements and Suggested Teaching Methods

上課方式以講授、問答、並輔以project，presentation及討論為輔助。鼓勵學生在上課時多提出問題及對理論的見解及詮釋。

Course Requirements and Suggested Teaching Methods:
The course will be run mostly on lectures, Q&A, discussion and guided project/presentation. Students' participation in explaining/discussing the theory and application implication is highly encouraged.

其他 Miscellaneous

課程成績評定之依據和標準：
依學生考試成績、小組參與討論及報告評定成績。

Grading Criteria

Exams, Team work, presentations and reports.