朝陽科技大學 095學年度第2學期教學大綱
Multivariate Analysis 多變量分析

當期課號	7652	Course Number	7652
授課教師		Instructor	
中文課名	多變量分析	Course Name	Multivariate Analysis
開課單位	工業工程與管理系碩士在職專班一A	Department	
修習別	選修	Required/Elective	Elective
學分數	3	Credits	3
課程目標	使學生具備下述之能力： a. 了解多變量分析應用之時機； b. 使用SPSS?求解多變量問題； c. 解釋多變量分析之統計報表； d. 執行敏感度分析並解釋其結果； e. 有效溝通並呈現多變量分析結果。	Objectives	Students will be able to: a. Identify a potential multivariate analysis-related problem. b. Solve multivariate problems via SPSS? software. c. Interpret statistical reports after multivariate analysis. d. Conduct sensitivity analysis and interpret results. e. Communicate the results of multivariate analysis both orally and in writing.
教材	Hair, J. F. et al., Multivariate Data Analysis,6th Edition, New Jersey: Pearson Education, 2006.	Teaching Materials	Hair, J. F. et al., Multivariate Data Analysis,6th Edition, New Jersey: Pearson Education, 2006.
成績評量方式	簡報 20%； 專題報告 30%； 考試 50%	Grading	Presentation 20%； Assignments 30%； Two Tests 50%
教師網頁			
教學內容	此課程以理論及實務應用兼顧的方式來介紹多變量分析的統計方法。文獻探討爲本課程之重點，使學生藉由簡報來分享多變量分析在學術與實務應用的價值，以激勵學生將之運用在個人之碩士論文中，從研究成果中截取更多資訊。主要授課主題包括矩陣代數與隨機陣列、多變量機率分布、變異數與迴歸分析回顧、主成份分析、因素分析、典型相關分析、判別分析、群落分析、以及路徑分析。本課程透過一系列的案例演練與簡報來增進學生對多變量分析的技巧，並以專題報告的方式來提昇學生的溝通及寫作能力。	Syllabus	This course covers the principles and practices of statistical methods for describing and analyzing multivariate data. Literature reviews concerning the application of multivariate methods on industry as well as academy are emphasized through students' presentation and project writing. Topics include Matrix Algebra & Random Vectors, Multivariate Distribution, Review of ANOVA & Regression, Principle Components, Factor Analysis, Canonical Correlation Analysis, Discrimination & Classification, and Cluster Analysis. A series of students' presentations provides a key bridge between the multivariate analysis theory and its applications, and enhance the communication skills of students by way of wording and oral practices

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