



課 綱 Course Outline  
資訊管理學系一般組

中文課程名稱 Course Name in Chinese	多變量分析				
英文課程名稱 Course Name in English	Multivariate Data Analysis				
科目代碼 Course Code	IM__50140	班 別 Degree	碩士班 Master' s		
修別 Type	必修 Required	學分數 Credit(s)	3.0	時 數 Hour(s)	3.0
先修課程 Prerequisite	無				
課程目標 Course Objectives					
Multivariate analysis consists of a collection of methods that can be used when several measurements are made on each observation in one or more samples. Multivariate analysis techniques are popular because they enable organizations to create knowledge and thereby improve their decision making. Thanks to a number of technological advances, multivariate analysis techniques become more powerful and can be more easily operated and applied today. This course aims to help students gain insight into these contemporary multivariate analysis techniques by means of introducing their concepts, theories, and applications. The selected readings, homework for practicing each technique, and term paper will also help students with better understanding for the purpose.					
系教育目標 Dept.' s Education Objectives					
1	培育具備資訊技術解決問題思維能力之高級人才 Cultivate senior personnel with the capability of information technology to solve problems with thinking skills				
2	以資訊技術為核心，培育具有高度專業能力之技術人才 Cultivate professional personnel with the capability of information technology				
3	以管理為對象，培育具有創新、研發、企劃整合能力之高級人才 Cultivate senior personnel with the capability of innovation, research and development and integrated planning				
4	提供數位內容、電子商務與知識管理所需之人才 Cultivate personnel with the capability of digital content, electronic commerce and knowledge management				
5	培育符合國家與區域發展所需之資訊管理人才 Cultivate information management personnel to meet the needs of national and regional development				

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	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	○
B	培養具備資訊專業知識與技能 Nurture professional ability and skill regarding information	●
C	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	●
E	培養具備獨立研究、領導智能與資訊創新能力 Nurture ability regarding independent research, leadership and information innovation	○

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

課程大綱 Course Outline
1. Course Introduction 2. Introduction: Methods and Model Building 3. Cleaning and Transforming Data 4. Factor Analysis 5. Simple and Multiple Regression 6. Multiple Discriminant Analysis and Logistic Regression 7. ANOVA and MANOVA 8. Grouping Data with Cluster Analysis 9. SEM: An Introduction 10. Applications of SEM
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.)
具資訊管理、研究模式建立、以及資料分析等專長之教師。
課程要求和教學方式之建議 Course Requirements and Suggested Teaching Methods
課堂講授、指定期刊文章閱讀與簡報、以及分組討論  課程成績評定之依據和標準 Grading Criteria Grading evaluation is based on 1. Term paper* (30%) 2. Homework (40%), 3. Presentation and Review (20%), 4. Class participation / Q & A (10%) * The turn-in term paper should not less than 20 pages, consisting of background, literature review, model development, data analysis, and references.

其他 Miscellaneous
參考書目： Hair, J.F., Black, W.C., Babin, B.J., and Anderson, R.E. Multivariate Data Analysis, 7th, Pearson, 2014. Field, A. Discovering Statistics Using SPSS, 3rd, London, UK: Sage, 2009. Lance, C.E., and Vandenberg, R.J. (edits) Statistical and Methodological Myths and Urban Legends, NY: Routledge, 2009.