



課 綱 Course Outline
企業管理學系博士班資訊管理組

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| 中文課程名稱 Course Name in Chinese | 商業資料分析 | | | | |
| 英文課程名稱 Course Name in English | Business Analytics | | | | |
| 科目代碼 Course Code | BM__85380 | 班 別 Degree | 博士班 Ph. D. | | |
| 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 | | | | | |
| This course provides a broad understanding and knowledge of important business analytic topics and how they can be used to support decision making in all business areas such as management, education, and marketing. Emphasis will be placed on the technical procedures that are used to describe, predict, and prescribe data into information for decision making. Students will learn how data exploration results in a sequence of descriptive, predictive and prescriptive processes to result in unique and new information on which decisions can be made. | | | | | |
| 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 and regional to meet the needs of national 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 | 培育具備資訊管理相關理論與應用的知識 Cultivate the knowledge of information management application | ● |
| B | 培育具備邏輯推演、問題解決與獨立研究的能力 Cultivate the capability of logical deduction, problem solving and independent research | ○ |
| C | 培養具備資訊專業知識與技能 Cultivate the professional ability and skill regarding information | ● |
| D | 培養具備資訊科技與管理領域之知識整合應用能力 Cultivate the integrated ability regarding information technology and management | ● |
| E | 培養具備創新思維、領導智能與國際觀的能力 Cultivate the ability regarding innovative thinking, leadership and international view | ○ |

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

課程大綱
Course Outline

1. Chapter 1 Introduction to Business Analytics
2. Chapter 2 Data Management and Wrangling
3. Chapter 3 Data Visualization and Summary Measures
4. Chapter 4 Probability and Probability Distribution & Review for Test I
5. Test I
6. Chapter 5 Statistical Inference
7. Chapter 6 Regression Analysis
8. Chapter 7 Advanced Regression Analysis & Review for Test II
9. Midterm Exam (Test II)
10. Chapter 8 Introduction to Data Mining
11. Chapter 9 Supervised Data Mining: K-Nearest Neighbors and Naive Bayes
12. Chapter 10 Supervised Data Mining: Decision Tree
13. Chapter 10 Supervised Data Mining: Decision Tree & Review for Test III
14. Test III
15. Chapter 11 Unsupervised Data Mining
16. Chapter 12 Forecasting with Time Series Data
17. Chapter 12 Forecasting with Time Series Data & Review for Test IV
18. Final Exam (Test IV)

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.)

Computer Labs and Statistical Software.

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

Title: Business Analytics
Authors: Sanjiv Jaggia and Alison Kelly and Kevin Lertwachara and Leida Chen
Edition: 1st
Publisher: McGraw Hill Education

ISBN: 9781260785005

其他
Miscellaneous