



課 綱 Course Outline

理工學院學士班

中文課程名稱 Course Name in Chinese	資料探勘與應用				
英文課程名稱 Course Name in English	Data Mining : Concepts, Techniques, and Applications				
科目代碼 Course Code	TCAI50060	班 別 Degree	碩士班 Master's		
修別 Type	學 程 Program	學 分 數 Credit(s)	3.0	時 數 Hour(s)	3.0
先修課程 Prerequisite	建議學生需已修過Python程式設計、有基本機率概念				

課程目標 Course Objectives

This course is designed to equip you with the foundational knowledge and hands-on experience needed to delve into the expansive world of data mining. Whether you are looking to enhance your skill set or embark on a new career path, this course will serve as a stepping stone to achieving your goals. The curriculum encompasses a range of topics that will introduce you to the core concepts and techniques prevalent in the field of data mining. These include:

- (1) Association Rules: Understand the principles behind identifying rules that highlight relationships between seemingly independent data in a database.
- (2) Clustering: Learn about grouping a set of objects in such a way that objects in the same group are more similar to each other than to those in other groups.
- (3) Classification: Gain knowledge on the procedures for identifying the predefined class of a new observation.
- (4) Text Mining: Equip yourself with the skills needed to analyze and interpret large collections of text data to extract meaningful information.

Data Mining Applications: Explore the various practical applications of data mining across different industries and sectors.

院教育目標 College's Education Objectives

1	培育專業知能，提升學習能力 Acquisition of professional competence and enhancement of learning abilities.	課程目標與院基本素養與核心能力 Correlation between Course Objectives and Basic Learning Outcomes
院基本素養與核心能力 College Basic Learning Outcomes		

A	具備數理基本知識、邏輯推理、分析解決問題之能力。 Basic math knowledge, logical reasoning, analytical and problem-solving skills.	
B	具備中外語言表達溝通技巧，以養成團隊合作的能力。 Ability to express ideas and communicate in Chinese and foreign languages and teamwork skills.	
C	具備終身學習的能力。 Lifelong learning ability.	

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

課程大綱
Course Outline

1. Introduction
2. Overview and Data
3. Lab For Data Exploration And Management (Make up for Mid-Autumn Festival)
4. Classification
5. Text Mining & Project Progress Report
6. Lab 2
7. Text Mining
8. DM Clustering
9. DM Clustering & Project Progress Report
10. Association
11. Student Paper Presentation (同時段同步報告)

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.)

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

評量方式
Evaluation methods
 平時報告: 10%
 期末考成績: 35%
 作業成績: 20%
 其他: 35%

其他
Miscellaneous