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		班　別 Degree			
修別 Type	選	學分數 Credit(s)	3.0	時　數 Hour(s)	3.0
先修課程 Prerequisite					

課程目標
Course Objectives

Data mining serves as a crucial field that leverages advanced algorithms to reveal hidden, yet invaluable insights buried within extensive datasets. These algorithms are drawn from a multitude of areas such as machine learning, artificial intelligence, pattern recognition, statistics, and database systems, working together to facilitate a deeper understanding and analysis of data.

This course, ISA5810: Data Mining: Concepts, Techniques, and Applications, 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.

課程大綱
Course Outline

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:

Association Rules: Understand the principles behind identifying rules that highlight relationships between seemingly independent data in a database.

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.

Classification: Gain knowledge on the procedures for identifying the predefined class of a new observation.

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.

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

1. Homework x 5   75%
2. Term Project x1 25%

其他
Miscellaneous