

國立中正大學企業管理碩士班教學大綱

九十四學年度第二學期

編 號： 5205156
科目名稱：資料探勘
英文譯名：Data Mining
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Office hours: by appointment via phone or email, or just come by my office. If I am not available, I will set another time for both of us.

教學目標：

We are currently living in an era of information explosion. There is a need to extract intelligent information and discover useful knowledge in the drowning data through various techniques. Many companies gathering huge amounts of electronic data have now begun applying data mining techniques to their data warehouses to discover and extract pieces of information useful for making smart business decisions. This course will discuss the available mining methods instead of developing algorithm, and introduce popular data mining software, and statistical tools to seek useful information in terms of visualization, pattern evaluation/recognition and interesting rules. Furthermore, to help the students develop an understanding of when and how to use each techniques for business problems or related domain knowledge applications.

授課大綱：

- Introduction to Data Mining and Overview
- DBMS, Data Warehousing and OLAP
- Data Preprocessing
- Statistical Concepts
- Clustering
- *Term Project Pre-Proposals by Students*
- Association Rules; Market Basket Analysis
- Classification
- *Journal Article Presentations by Students*
- Prediction/Regression; Decision Trees/Regression Trees
- Artificial Neural Networks
- Intro to Web Mining

- Term Project Presentations by Students

教科書：

1. Michael J. A. Berry and Gordon S. Linoff (2004), **Data Mining Techniques for Marketing, Sales, and Customer Relationship Management**, 2nd ed., Wiley
2. **Introduction to Data Mining and Knowledge Discovery**, Third Edition, ISBN: 1-892095-02-5 (Can be downloaded via website for free)
3. Lecture **Handouts** and **Articles** posted on website
4. Recent **journal papers**

參考書籍：

1. Tan, P., Steinbach, M., and Kumar, V. (2006) Introduction to Data Mining, 1st edition, Addison-Wesley, ISBN: 0-321-32136-7.
2. Vasant Dhar and Roger Stein, Prentice-Hall (1997), Seven Methods for Transforming Corporate Data Into Business Intelligence
3. H. Witten and E. Frank (2005), Data Mining: Practical Machine Learning Tools and Techniques, 2nd edition, Morgan Kaufmann, ISBN: 0-12-088407-0, closely tied to the WEKA software.
4. Ethem ALPAYDIN, Introduction to Machine Learning, The MIT Press, October 2004, ISBN 0-262-01211-1
5. J. Han and M. Kamber (2000) Data Mining: Concepts and Techniques, Morgan Kaufmann. Database oriente.

評量方式：

Homework	15%
Article Presentation	20%
Pre-Proposal Presentation	20%
Team Project (Presentation + Term Paper)	40%
Attendance	5%
Extra Credits (class discussion, learning attitude, etc.)	5%~10%