



教學計劃表 Syllabus

| | | | |
|---|--|---------------------------------|---|
| 課程名稱(中文) Course Name in Chinese | 資訊檢索 | 學年/學期 Academic Year/Semester | 112/1 |
| 課程名稱(英文) Course Name in English | Information Retrieval | | |
| 科目代碼 Course Code | BM_83100 | 系級 Department & Year | 博士 Course-Offering Department |
| 修別 Type | 選修 Elective | 學分數/時間 Credit(s)/Hour(s) | 3.0/3.0 |
| 授課教師 Instructor | /劉英和 | | |
| 先修課程 Prerequisite | | | |
| 課程描述 Course Description | | | |
| The goal of this course is to introduce not only the issues of information retrieval but also data mining, machine learning, and related applications such as pattern mining, image/object recognition, and text mining. By broadly reviewing the above areas, students will be familiar with the technical perspectives of digital content management and knowledge retrieval. | | | |
| 課程目標 Course Objectives | | | |
| 本課程旨在對於資訊檢索做一廣泛性的介紹。課程內容包括介紹文件的呈現方式、term weighting、比較資訊檢索系統的判準、文字分類及叢集等。預期學生在修習完本課程後，能夠掌握資訊檢索領域的理論與應用，並對於現今資訊檢索領域所關注的議題有所認識及瞭解。本課程希望學生具備基本的程式語言能力以及嫻熟於資料結構，以利作業及專案實作的進行。 | | | |
| 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 | | | |
| 授課進度表 Teaching Schedule & Content | | | |
| 週次Week | 內容 Subject/Topics | | 備註Remarks |
| 1 | Data mining and machine learning | | |
| 2 | Data preprocessing | | |
| 3 | Mining frequent patterns & association rules | | |
| 4 | Classification and prediction | | |

| | | |
|----|--|--|
| 5 | Cluster analysis | |
| 6 | Image/object recognition | |
| 7 | Image descriptors | |
| 8 | Recognition methods | |
| 9 | Information retrieval | |
| 10 | The term vocabulary and postings lists | |
| 11 | Vector space model | |
| 12 | Evaluation in information retrieval | |
| 13 | | |
| 14 | | |
| 15 | | |
| 16 | | |
| 17 | | |
| 18 | | |

教學策略 Teaching Strategies

- 課堂講授 Lecture
 分組討論 Group Discussion
 參觀實習 Field Trip
 其他 Miscellaneous:

教學創新自評 Teaching Self-Evaluation

創新教學 (Innovative Teaching)

- 問題導向學習 (PBL)
 團體合作學習 (TBL)
 解決導向學習 (SBL)
 翻轉教室 Flipped Classroom
 磨課師 Moocs

社會責任 (Social Responsibility)

- 在地實踐 Community Practice
 產學合作 Industry-Academia Cooperation

跨域合作 (Transdisciplinary Projects)

- 跨界教學 Transdisciplinary Teaching
 跨院系教學 Inter-collegiate Teaching

- 業師合授 Courses Co-taught with Industry Practitioners

其它 other:

學期成績計算及多元評量方式 Grading & Assessments

| 配分項目 Items | 配分比例 Percentage | 多元評量方式 Assessments | | | | | | | |
|----------------------------------|--------------------|--------------------|----------|----------|----------|----------|----------|----------|----|
| | | 測驗 會考 | 實作 觀察 | 口頭 發表 | 專題 研究 | 創作 展演 | 卷宗 評量 | 證照 檢定 | 其他 |
| 平時成績 General Performance | 10% | | | | | | | | |
| 期中考成績 Midterm Exam | 25% | | | | | | | | |
| 期末考成績 Final Exam | 25% | | | | | | | | |
| 作業成績 Homework and/or Assignments | | | | | | | | | |
| 其他 Miscellaneous (paper reading) | 40% | | | | | | | | |

評量方式補充說明

Grading & Assessments Supplemental instructions

教科書與參考書目 (書名、作者、書局、代理商、說明)

Textbook & Other References (Title, Author, Publisher, Agents, Remarks, etc.)

Data mining: concepts and techniques, 3rd ed., J. Han and M. Kamber, Morgan Kaufmann, 2011. (ISBN-13: 978-0123814791)

Introduction to Information Retrieval, C.D. Manning, P. Raghavan, and H. Schütze, Cambridge University Press. 2008. (<http://nlp.stanford.edu/IR-book/information-retrieval-book.html>)

Pattern Classification, 2nd ed., R.O. Duda, P.E. Hart, and D.G. Stork, Wiley-Interscience, 2000.

課程教材網址(含線上教學資訊, 教師個人網址請列位於本校內之網址)

Teaching Aids & Teacher's Website(Including online teaching information.

Personal website can be listed here.)

線上教學位址 meet.google.com/eiq-xjzk-wyw

其他補充說明 (Supplemental instructions)