國立東華大學

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	115/1
課程名稱(英文) Course Name in English	Information Retrieval				
科目代碼 Course Code	IM__50050	系級 Department & Year	碩士	開課單位 Course-Offering Department	資訊管理學系
修別 Type	必修 Required	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	培育具備創造與思考能力、服務精神、團隊合作以及國際觀Nurture ability regarding creativity and thinking, spirit of service, teamwork and international view	○
B	培養具備資訊專業知識與技能Nurture professional ability and skill regarding information	●
C	培養具備資訊科技與管理領域之知識整合應用能力Nurture integrated ability regarding information technology and management	●
D	培養具備解決問題之資訊剖析、組織、整合、應用以及表達的能力Nurture ability of information analysis, organization, integration, application, and expression regarding problem solving	●
E	培養具備獨立研究、領導智能與資訊創新的能力Nurture ability regarding independent research, leadership and information innovation	○

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 retrieva	
10	The term vocabulary and postings lists	
11	Vector space model	
12	Evaluation in information retrieval	
13	Text mining (I)	
14	Text mining (II)	
15	Large Language Model(I)	
16	Large Language Model(II)	
17	期末考試週 Final Exam	

彈性教學規劃 Flexible Teaching Plan	請勾選(至少需勾選1 個項目): Please tick the box(es). (At least one item is required.): ☑ 問題討論 Problem-based Discussion ☐ 翻轉教學 Flipped Classroom ☐ 展演實作 Performance / Practical Presentation ☐ 校外參訪Off-campus Visit ☐ 講座活動 Lecture / Seminar ☐ 線上作業 Online Assignments ☑ 自主學習 Self-directed Learning ☐ 課業輔導Academic Support ☐ 實驗操作 Experiment Operation ☐ 遠距教學(同步) Distance Learning (Synchronous) ☐ 遠距教學(非同步) Distance Learning (Asynchronous) ☐ 其他(請填寫) Others (Please specify.): 備註: 本校學期週數自115 學年度起調整為17 週，為符合1學分18 小時之原則，請教師規劃安排彈性教學。 Note: From the 115th academic year, the semester will be 17 weeks. Please include flexible teaching activities to meet the required 18 hours per credit.

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 Industy-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(含出缺席) General Performance (Attendance Record)	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, 3nd 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)