國立東華大學

教學計劃表 Syllabus

課程名稱(中文) Course Name in Chinese	人工智慧			學年/學期 Academic Year/Semester	113/2
課程名稱(英文) Course Name in English	Artificial Intelligence				
科目代碼 Course Code	IM__50210	系級 Department & Year	碩士	開課單位 Course-Offering Department	資訊管理學系
修別 Type	選修 Elective	學分數/時間 Credit(s)/Hour(s)	3.0/3.0		
授課教師 Instructor	/吳怡菱				
先修課程 Prerequisite					

課程描述 Course Description

This course introduces various AI techniques, including intelligent agents, constraint satisfaction problems, machine learning, deep learning, and optimization algorithms.

課程目標 Course Objectives

介紹智慧型系統之理論、設計、實作與應用。

	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	Course Introduction	
2	Peace Memorial Day	No Class
3	Intelligent Agent and AI tools for research	
4	Graduation Project Proposal of IM in D124	
5	Constraint Satisfaction Problems and Optimization	
6	Solving Problems by Searching and Metaheuristic	

7	Spring Break	No Class
8	Exam and Questionnaire	
9	期中考試週 Midterm Exam	
10	Neural Network and Deep Learning	
11	Convolutional Neural Network and Graph Neural Network	
12	Recurrent Neural Network and Generative Adversarial Network	
13	Reinforcement Learning	
14	Exam and Questionnaire	
15	Dragon Boat Festival	No Class
16	Final Presentation	
17	期末考試週 Final Exam	
18	Free Discussion	

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 General Performance	20%			✓					Paper Presentation
期中考成績 Midterm Exam									
期末考成績 Final Exam	30%			✓	✓				FInal Presentation
作業成績 Homework and/or Assignments	20%				✓				Weekly Note-taking
其他 Miscellaneous (_____)	30%	✓							Exam

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.)

Russell, S., & Norvig, P. (2016). Artificial Intelligence: A Modern Approach, Global Edition. Pearson.
Zhang, A., Lipton, Z. C., Li, M., & Smola, A. J. (2021). Dive into deep learning. arXiv preprint arXiv:2106.11342.

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.)

其他補充說明 (Supplemental instructions)