



課 綱 Course Outline  
理工學院學士班

中文課程名稱 Course Name in Chinese	人工智慧導論				
英文課程名稱 Course Name in English	Introduction to Artificial Intelligence				
科目代碼 Course Code	TCAI10030	班 別 Degree	學士班 Bachelor' s		
修別 Type	學程 Program	學分數 Credit(s)	3.0	時 數 Hour(s)	3.0
先修課程 Prerequisite					
課程目標 Course Objectives					
This course introduces students to the fundamentals, problem-solving methods, and learning paradigms of artificial intelligence. Topics covered include intelligent agents, uninformed and informed searching, adversarial search and games, statistical learning, neural networks, and AI applications.					
院教育目標 College.'s Education Objectives					
1	培育專業知能，提升學習能力 Acquisition of professional competence and enhancement of learning abilities.				
院基本素養與核心能力 College Basic Learning Outcomes				課程目標與院基本素養與核心能力 Correlation between Course Objectives and Basic Learning Outcomes	
A	具備數理基本知識、邏輯推理、分析解決問題之能力。 Basic math knowledge, logical reasoning, analytical and problem-solving skills.				
B	具備中外語言表達溝通技巧，以養成團隊合作的能力。 Ability to express ideas and communicate in Chinese and foreign languages and teamwork skills.				
C	具備終身學習的能力。 Lifelong learning ability.				
圖示說明Illustration：● 高度相關 Highly correlated ○ 中度相關 Moderately correlated					
課程大綱 Course Outline					
1. Introduction, Intelligent Agents					

2. Solving Problems by Searching
3. Search in Complex Environments
4. Quantifying Uncertainty
5. Learning from Examples
6. Learning Probabilistic Models
7. Deep Learning
8. Deep Learning for Natural Language Processing
9. Agentic AI 與 AI Agents
10. Computer Vision
11. Final Exam
12. Generative AI
13. Final project

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

課堂作業包括程式作業，修課學生需具備程式撰寫能力以及演算法的基本知識。

- 評量方式  
Evaluation methods
- 作業成績：60%
  - 期末考成績：30%
  - 其他：30%

其他  
Miscellaneous