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## ②國玄東華大學

# 教學計劃表 Syllabus

課程名稱(中文) Course Name in Chinese	生成式人工智慧	的人文導論AA		學年/學期 Academic Year/Semester		113/2	
課程名稱(英文) Course Name in English	Introducing Generative AI for the Humanities						
科目代碼 Course Code	TCAI5001AA	系級 Department 學二 & Year		開課單位 Course-Offering Department	資訊工程學系		
修別 Type	選修 Elective	學分數/時 Credit(s)/Hou		3.0/3.0			
授課教師 Instructor	/陳世文/謝舒凱(遠端授課教師)						
先修課程 Prerequisite							

#### 課程描述 Course Description

隨著AI科技的迅速發展,人類社會的各個面向都開始受到了不同層面的衝擊。生成式 AI 迅速與多樣化產製內容的能力,不論在知識傳承,或是實務創作上也帶給人文社會領域新的養分與挑戰。本堂課是特別針對人文領域的學生設計的 AI 技術與應用入門課。在內容安排與講解上, 與一般純粹以技術入門的導論課有許多不同。本堂課將以人本為核心關懷出發,以直觀概念與模擬技術來講解 AI 模型的基礎與發展,並搭配與人文主題相關的實作練習,特別是文史哲議題、語言與溝通、藝術音樂與遊戲創作等等。

With the rapid development of AI technology, various aspects of human society have begun to experience impacts at different levels. The ability of generative AI to quickly and diversely produce content has brought new nourishment and challenges to the humanities and social sciences, both in terms of knowledge transmission and practical creation.

This course is specifically designed for students in the humanities as an introductory course to AI technology and its applications. In terms of content arrangement and explanation, it differs significantly from purely technical introductory courses. This course will take a human-centered approach, using intuitive concepts and simulation techniques to explain the fundamentals and development of AI models. It will also include hands-on exercises related to humanities themes, particularly issues in literature, history, and philosophy, language and communication, as well as artistic, musical, and game creation.

#### 課程目標 Course Objectives

隨著AI科技的迅速發展,人類社會的各個面向都開始受到了不同層面的衝擊。生成式 AI 迅速與多樣化產製內容的能力,不論在知識傳承,或是實務創作上也帶給人文社會領域新的養分與挑戰。 本堂課是特別針對人文領域的學生設計的 AI 技術與應用入門課。在內容安排與講解上, 與一般純粹以技術入門的導論課有許多不同。本堂課將以人本為核心關懷出發,以直觀概念與模擬技術來講解 AI 模型的基礎與發展,並搭配與人文主題相關的實作練習,特別是文史哲議題、語言與溝通、藝術音樂與遊戲創作等等。

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	課程內容說明 Curriculum introduction	環境建立,需有學校與 google 帳號
2	和生成式AI模型說話:提示的語言工程 (1) (Prompting LLM) Talking to Generative AI Models: The Language Engineering of Prompting (1) (Prompting LLM)	
3	和生成式AI模型說話:提示的語言工程 (2) (Prompting LLM) Talking to Generative AI Models: The Language Engineering of Prompting (2) (Prompting LLM)	
4	讓生成式AI模型少說錯(RAG and VectorDB) Making Generative AI Models Less Error-Prone(RAG and VectorDB)	

5	讓生成式AI模型學點新東西 (Fine-Tune) Teaching Generative AI Models Something New (Fine-Tune)							
	生成式AI /大型語言模型原理 (1) Embeddings explained							
6	Principles of Generative AI / Large Language Models (1): Embeddings Explained							
7	清明假期(放假)							
	生成式AI /大型語言模型原理 (2) (Transformer explained)							
8	8 Principles of Generative AI / Large Language Models (2): Transformer Explained							
	生成式AI的語音與多模態(1)(Speech and Multimodal LLMs)							
9	Speech and Multimodal Capabilities of Generative AI (1) (Speech and Multimodal LLMs)							
10	生成式AI的藝術與音樂創作 (Artistic and Musical LLMs) Artistic and Musical Creation with Generative AI (Artistic and							
11	Musical LLMs) 模型與應用評測 (Evaluation and Benchmarks)							
	Model and Application Evaluation (Evaluation and Benchmarks)  遠 4 まま 4 は 時 利 (何) 一 却 今 体 (1) (Compound 4 I)							
12	Enabling Generative AI Models to Collaborate (1) (Compound AI)							
13	i襄生成式AI模型 (們) 一起合作(2) (Compound AI) Enabling Generative AI Models to Collaborate (2) (Compound AI)							
14								
15	人機共存的新世界:人類價值與倫理 議題 (Digital Avatar, Humanoid/Alignment and Ethical AI)							
	期末專案聯合展演							
16	Final Project Presentation 1. 準備個人或團隊專案展示,將學期內學到的技術與知識應用到實際項目							
	中,展現學習成果。 2. 設計多樣化、跨領域的展演形式。							
17	自主學習							
18	Self-Directed Learning 自主學習							
10	Self-Directed Learning     教學策略 Teaching Strategies							
	授 Lecture ✓ 分組討論Group Discussion 参觀實習 F	-						
其他Miscellaneous: - 本課程提供 Nvidia 深度學習基礎認證(非強制)。有興趣參與的同學,需預先登								
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								
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其它 othe	ar·							
7. G Other								

學期成績計算及多元評量方式 Grading & Assessments									
配分項目	配分比例 Percentage	多元評量方式 Assessments							
Items		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)	20%								
期中考成績 Midterm Exam									
期末考成績 Final Exam	40%								
作業成績 Homework and/or Assignments	40%								
其他 Miscellaneous ()									

評量方式補充說明

Grading & Assessments Supplemental instructions

課堂參與與反思回饋 20%

每週課後作業 40%

期末專案展演 40%

### 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.)

- Raschka, S. (2024). Build a Large Language Model from Scratch. Manning.
- Pai, S. (2025). Designing Large Language Model Applications: A Holistic Approach to LLMs. O' Reilly.
- Porter, L. and D. Zingaro. (2024). Learn AI-assisted Python Programming. Manning.
- 程世嘉 (2024). AI 世界的底層邏輯和生存法則. 天下文化.

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)