

天主教輔仁大學課程資訊系統

Course Syllabus, Fu-Jen Catholic University

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一、課程基本資訊：

開課單位 Department/ Institute	英國語文學系碩士班			學制別 Education System	研究所		
學年度 Academic year	110	學期 Semester	☐ 第一學期 (Fall)	☒ 第二學期 (Spring)	☐ 全學年 (Entire Year)		
課程名稱 Course Title	語言與科技的碰撞： 圖數據與商業難題解析			選別 Required/ Elective	選修	學分數 Credits	3
擋修課程	無						
課程語言 Medium of Instruction	全英文			教材語言 Language for materials	全英文		
授課教師 Instructor	林宗瀛、劉紀雯		教師背景 Background	專任/教授			
此課程是否符合教師專長			是				

二、基本素養

學科學習能力--關聯性
2.英文[直接相關] 3.資訊[無關聯性]

三、核心能力

知識項目--關聯性
13.歷史與文化[間接相關]、21.外國語文與文學[直接相關]

技能與態度項目--關聯性
2.積極傾聽[直接相關]、3.文字表達[直接相關]、4.口語表達[直接相關]、7.批判思考[直接相關] 9.學習策略[間接相關]、12.合作[間接相關]、17.解決複雜問題[間接相關]、36.創意力[間接相關]

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五、課程學習目標

課程學習目標	This course aims to teach students how to visualize and then contextualize data. From simple knowledge graphs, we will connect the dots – to reveal and predict how people, processes, things, events and systems are interrelated so that you can tackle connected data challenges such as analytics, fraud detection, recommendations and investigations. We want to make this a short, easy yet enjoyable journey so that you feel confident solving business questions using knowledge graph. We also use Gemini Explore for all our examples. You will be able to run those examples after signing up to Gemini Cloud which you can also use to build your own knowledge graph. We hope you finish this course with 1) a basic understanding of how to apply knowledge graphs to a handful of user cases and 2) enthusiasm for the technology of data contextualization.
先修課程	N/A

六、授課進度

授課進度 Course Progress Outline				
週次 Week	日期 Date	主題 Topic	單元主題 Unit	備註 Remark
1	02/24	Introducing Knowledge Graphs	Exploring Knowledge Graph Basics -Who uses this and why -Benefit of knowledge graph Explaining Labeled Property Graphs -Nodes -Relationship -Properties	<i>Graph Databases</i> Chap 1 pp. 3-6
2	03/3	Building Knowledge Graphs Data Models	Building a Sample Graph -Defining the domain & questions -Sourcing/Creating sample datasets -Defining knowledge graph data objects (nodes, relationships, and properties)	<i>Graph Databases</i> Chap 1 pp. 9-10
3	03/10	Building Knowledge Graphs Data Models (Exercise)	Whiteboarding Exercise: Draw Your First Knowledge Graph -Student Presentation	<i>Graph Databases</i> Chap 2
4	03/17	Importing Data into	Signing up to Gemini Cloud	<i>Graph</i>

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		Your Knowledge Graph	-Create a project -Import data -Define Nodes -Define Properties -Define Relationships -Data Models Preview -Exercise	<i>Databases</i> Chap 3
5	03/24	Querying and Interacting with Knowledge Graph	Using Knowledge Graphs in Production with Gemini Explore -Exploration canvas -Ways to add data -Filtering with conditional searches -Data Exploration -Personalize exploration results with conditional display -Discover relationships/insights -Create knowledge -Share story	<i>Graph Databases</i> Chap 4
6	03/31	Querying and Interacting with Knowledge Graph (Exercise)	Knowledge Graph in Action -Student Presentation	
7	04/07	Spring Break		
8	04/14	Knowledge Graph Use Case Study 1 & 2	IMDB – Movie Database; Breaking Wordle	
9	04/21	Knowledge Graph Use Case Study 3	Fraud Detection	Mid-Term Proposal
10	04/28	Knowledge Graph Use Case Study 4	Investment Prospecting	
11	05/05	Knowledge Graph Use Case Study 5	Cyber Security Incident Triage	
12	05/12	Knowledge Graph Use Case Study 6	Political Contributions Study	
13	05/19	Knowledge Graph Use Case Study 7	Epidemic Disease Contact Tracing (COVID-19)	
14	05/26	Knowledge Graph Use Case Study 8	Stock Market Research	
15	06/02	Knowledge Graph Use Case Study 10	Supply Chain Management	
16	06/09	Tips for Creating Successful knowledge graphs	-Use the right tools for the right job -Use knowledge graph for obvious use cases -Begin with modeling	<i>Graph Databases</i> Chap 6

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			-Start small, scale next -Model for question -Value Matters -Uncover Hidden Insights	
17	06/16	Exam	Project Presentation	
18	06/23	Exam	Autonomous Learning Week	
Office Hours	By appointment, or 林宗瀛 Office Hour:		聯絡方式 及辦公室 地點 Contact Information	Johnny Lin 林宗瀛 <johnnylin@systexgroup.com> Kate Liu 劉紀雯; E-mail: 034702@mail.fju.edu.tw 聯絡電話 Phone: 02-29052550 研究室 Room: LA115

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七、教學方法

教學方法 Pedagogical Methods	方法Method	%	方法Method	%	方法Method	%
	講述	30	影片欣賞	0	討論	20
	個案研討	0	服務學習	0	問題導向學習	0
	競賽遊戲	0	專家演講	0	專題實作	20
	電子教學	0	體驗教學	0	角色扮演實境教學	0
	競賽讀書會	0	產業實習	0	自主學習	0
	對話教學法	0	樣本觀察	0	校外參訪	0
	實作教學	30	個別指導	0	其他	0
說明：						
備註：1.若使用其他教學方法，請自行說明。若所列之教學方法未使用，只需於百分比欄位中填0。各項總合須等於100%						
2.教學方法與核心能力相關之說明亦可於此欄位中敘明。						

八、課程教材

課程教材 Course Material	Handouts.
教科書	<i>Graph Databases For Dummies</i> https://neo4j.com/graph-databases-for-dummies/
參考書目 Reference	<i>Big Data: An Art of Decision Making</i> . Schmitt, Eglantine. Wiley-ISTE, 2020. More resources here: https://reurl.cc/bGQij6
教學平台網址	

九、學習評量

學習評量 Learning Evaluation	方法Method	%	方法Method	%	方法Method	%
	課堂之前測	0	學生表現側寫 報告	0	個案分析報告 撰寫	0
	專題發表	0	課堂上實作演 練	0	專業團體之證 照檢定	0
	期中考	20	期末考	40	隨堂考(小考)	0
	書面報告(含 小組或個人)	0	課堂參與	10	心得或作業撰 寫	0
	口頭報告(含 小組或個人)	10	面試或口試	0	自評與小組互 評	0
	參加競賽	0	展演	0	筆記	0
	其他	20				
	說明： Grading Policy (explain the work students need to do)					
備註：1.若使用其他評量方法，請自行說明。若所列之評量方法未使用，只需於百分比欄位中填0。各項						

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	總合須等於100% 2.學習評量與核心能力相關之說明亦可於此欄位中敘明。
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十、學習規範

學習規範	1. Reading before class 2. Attendance: No lateness or absence. Three unexcused absences results in failure to pass the course. Three latenesses means one absence. 出缺席：不得遲到與缺席。三次缺席等於九次曠課，形同被當。三次遲到等於一次缺席。 3. Active participation: required. No use of cell phone after the quiz. Sleeping in class (not dozing off occasionally) means absence. 積極參與討論。小考後不得使用手機。上課睡覺亦同缺席。 4. Group collaboration is essential to this course, 課外小組討論亦不得遲到早退，以尊重組員。
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說明：有關上課的規則，例如：請假、遲到、遲交作業等相關規定