

朝陽科技大學 099學年度第2學期教學大綱  
Knowledge Engineering 知識工程

當期課號	7433	Course Number	7433
授課教師	陳榮靜	Instructor	CHEN,RUNG CHING
中文課名	知識工程	Course Name	Knowledge Engineering
開課單位	資訊科技研究所博士班二A	Department	
修習別	選修	Required/Elective	Elective
學分數	3	Credits	3
課程目標	本課程以人工智慧技術為主探討知識建構與推論技術, 建立各種知識的表示法以及知識推論的技巧. 目的在培養學生如何將人的知識轉成計算機推論的知識內容以建構智慧型之系統, 內容包括 1. 智慧型知識系統簡介 2. 人工智慧技術發展 3. 一階與高階邏輯推論 4. 規則推論系統 5. 模糊規則推論 6. 框架系統 7. 案例推論與黑板系統 8. 神經網路與遺傳演算法 9. 混合式推論系統 10. 知識與資料探勘 11. 語意網應用與討論	Objectives	This course is based on artificial intelligence system. The purpose of the course will let students have ability to transfer human knowledge to machine reasonable knowledge. The content includes: knowledge-based intelligent systems, rule-based expert system and uncertainty management, first order and high order logic, fuzzy expert model, frame-based expert system and blackboard system, case reasoning, evolutionary computation, neural network, hybrid intelligent system, data mining and knowledge discover and semantic web primer discussion.
教材	1. Michael Negnevitsky, Artificial Intelligence: A guide to intelligent Systems, Addison Weseley, 2002 2. Notes of Rung -Ching Chen	Teaching Materials	1. Michael Negnevitsky, Artificial Intelligence: A guide to intelligent Systems, Addison Weseley, 2002 2. Notes of Rung -Ching Chen
成績評量方式	書面報告或測驗: 25% 論文上台報告或期中測驗: 30% 期末報告: 30% 出席: 15%	Grading	general reports or testing: 30% final reports: 30% oral reports or middle test: 20% attention: 20%
教師網頁	<a href="ftp://www.cyut.edu.tw/~crching">ftp://www.cyut.edu.tw/~crching</a>		
教學內容	本課程探討相關之資訊管理技術並以人工智慧技術為主, 建立各種知識的表示法以及知識推論的技巧. 目的在培養學生如何將人的知識轉成計算機推論的知識內容以建構智慧型之系統, 內容包括 1. Introduction to knowledge-based intelligent systems 2. The history of artificial intelligence, or from the 'Dark Ages' to knowledge-based systems 3. Rule-based expert systems 4. Uncertainty management in rule-based expert systems 5. Fuzzy expert systems 6. Frame-based expert systems 7. case reasoning and blackboard 8. Artificial neural networks 9. Evolutionary computation 10. Hybrid intelligent systems 11. Knowledge engineering and data mining	Syllabus	This course is focus on artificial intelligence system. The content includes: 1. Introduction to knowledge-based intelligent systems 2. The history of artificial intelligence, or from the 'Dark Ages' to knowledge-based systems 3. Rule-based expert systems 4. Uncertainty management in rule-based expert systems 5. Fuzzy expert systems 6. Frame-based expert systems 7. case reasoning and blackboard 8. Artificial neural networks 9. Evolutionary computation 10. Hybrid intelligent systems 11. Knowledge engineering and data mining

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