

朝陽科技大學 095學年度第2學期教學大綱
Fuzzy Logic and Its Applications 模糊理論與其應用

當期課號	7787	Course Number	7787
授課教師	林正堅	Instructor	LIN, CHENG JIAN
中文課名	模糊理論與其應用	Course Name	Fuzzy Logic and Its Applications
開課單位	資訊工程系碩士在職專班一A	Department	
修習別	選修	Required/Elective	Elective
學分數	3	Credits	3
課程目標	<p>人們在做決策分析時，常常會面臨對事件的不確定性，模糊集合及其相關衍生理論提供一些模擬不確定性的理論方法，本課程內容包括模糊集合基礎理論介紹，使學生了解智慧型控制之基本觀念及各種不同的方法在控制領域之應用。</p> <ol style="list-style-type: none"> 1. 起源及應用 2. 模糊數學介紹 3. 模糊關係與模糊運算 4. 模糊邏輯與模糊語言 5. 模糊控制系統架構 6. 模糊分類器 7. 解模糊化過程 8. 模糊系統設計 	Objectives	<p>People will often face the uncertainty to the incident while making decision analysis, fuzzy set and deriving the theory to offer some simulation deterministic theory methods relevantly, this course content includes the introduction to the basic theory of the fuzzy set, which make students understand intelligent basic idea and application in the controlled field of all kinds of methods that controlled.</p> <ol style="list-style-type: none"> 1. Origin and application 2. Introduction to fuzzy mathematics 3. Fuzzy relation and fuzzy operation 4. Fuzzy logic and fuzzy language 5. Structure of the fuzzy control system 6. Fuzzy Cluster 7. Solve the fuzzy course of melting 8. Fuzzy system design
教材	<p>Text Book Fuzzy Logic: Intelligence, Control, and Information John Yen and Reza Langari Prentice Hall (高立圖書代理)</p> <p>Ref. Book Neural Fuzzy Systems: A Neuro-Fuzzy Synergism to Intelligent Systems C.-T. Lin and C. S. G. Lee Prentice Hall (高立圖書代理)</p>	Teaching Materials	<p>Text Book Fuzzy Logic: Intelligence, Control, and Information John Yen and Reza Langari Prentice Hall (高立圖書代理)</p> <p>Ref. Book Neural Fuzzy Systems: A Neuro-Fuzzy Synergism to Intelligent Systems C.-T. Lin and C. S. G. Lee Prentice Hall (高立圖書代理)</p>
成績評量方式	<p>期中考: 40%</p> <p>作業: 30%</p> <p>專題 (simulation, presentation, and report) : 30 %</p>	Grading	<p>Midterm: 40%</p> <p>Homework: 30%</p> <p>Project (simulation, presentation, and report) : 30 %</p>
教師網頁	-		
教學內容	<p>簡介</p> <p>模糊邏輯基本概念</p> <p>模糊集合</p> <p>模糊關聯, 模糊圖形及模糊運算</p> <p>模糊若~則~法則</p> <p>模糊推論及近似推論</p> <p>模糊邏輯在系統識別及控制工程應用</p> <p>模糊邏輯在資料庫及資訊系統應用</p> <p>類神經模糊系統</p> <p>基因演算法及模糊邏輯</p>	Syllabus	<p>Introduction</p> <p>Basic Concepts of Fuzzy Logic</p> <p>Fuzzy Sets</p> <p>Fuzzy Relations, Fuzzy Graphs, and Fuzzy Arithmetic</p> <p>Fuzzy If-Then Rules</p> <p>Fuzzy Implications and Approximate Reasoning</p> <p>Fuzzy Logic in Identification and Control Engineering</p> <p>Hierarchical Intelligent Control</p> <p>Fuzzy Logic in Database and Information Systems</p> <p>Neuro-Fuzzy Systems</p> <p>Genetic Algorithms and Fuzzy Logic</p>

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