



課 綱 Course Outline
資訊工程學系國際組

中文課程名稱 Course Name in Chinese	最佳化與決策專題				
英文課程名稱 Course Name in English	Topics on optimization and decision making				
科目代碼 Course Code	CSIEM0050	班 別 Degree	碩士班 Master' s		
修別 Type	選修 Elective	學分數 Credit(s)	3.0	時 數 Hour(s)	3.0
先修課程 Prerequisite					
課程目標 Course Objectives					
<p>This course aims to build the capability in multi-criteria/ multi-objective decision making and soft computing.</p> <p>The syllabus covers several key areas, including optimization, multi-criteria/ multi-objective decision making, optimization in classification, etc. Besides lectures, paper reading and discussions are required. One of the goals is to help the students get prepared for their thesis development.</p>					
系教育目標 Dept.'s Education Objectives					
1	探究學科知識，善用專業技能 Explore academic knowledge, utilize professional skills.				
2	訓練評析思考，創新解決問題 Exercise analytical thinking, enhance creative problem solving skills.				
3	學習團隊分工，強化溝通表達 Participate in teamwork, strengthen communication skills.				
系專業能力 Basic Learning Outcomes				課程目標與系專業能力相關性 Correlation between Course Objectives and Dept.'s Education Objectives	
A	統合資工知識技術之能力 Ability to integrate knowledge and technologies of computer science and information engineering.			○	
B	設計技術理論驗證實驗之能力 Ability to design and conduct science experiments and to validate hypotheses.			●	

C	資訊軟體設計開發之能力 Ability to design and develop computer software and hardware.	○
D	團隊專案開發之能力 Ability to design and develop team projects.	○
E	批判性思考與創新研發之能力 Ability of analytical thinking, creative research planning, and innovative development.	●

圖示說明 Illustration : ● 高度相關 Highly correlated ○ 中度相關 Moderately correlated

課程大綱
Course Outline

1. 非線性規畫 (nonlinear programming)
2. 模糊規畫 (fuzzy programming)
3. 多目標決策 (multiple criteria/ multiple objective decision making)
4. 賽局理論 (game theory)
5. 最佳化在分類方法的應用 (optimization in classification)

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

Class lectures, assignments, lab sessions and term project

其他
Miscellaneous