



課 綱 Course Outline  
運籌管理研究所碩士班一般組

中文課程名稱 Course Name in Chinese	網路分析與應用				
英文課程名稱 Course Name in English	Network Analysis and Applications				
科目代碼 Course Code	GSLM52500	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					
介紹運輸網路均衡分析(Transportation Network Equilibrium Analysis)，及常用的網路流量問題，包含最大流量問題(Maximum Flow Problem)、最小成本流量問題(Minimum Cost Flow Problem)及多元商品流量問題(Multicommodity Flow Problem)等。					
系教育目標 Dept.' s Education Objectives					
1	培養具備管理科學與運籌供應鏈知識能力之專業人才。 To nurture professionals with knowledge and skills in management science, logistics, and supply chain management				
2	培養具備邏輯思考與決策分析能力之管理專業人才。 To nurture management professionals with logical thinking and analytical decision skills				
3	培養具備國際溝通與簡報能力之專業人才 To nurture bilingual professionals with communication and presentation skills				
4	培養具有國際視野與在地經驗之運籌管理專才。 To nurture professionals in logistics management with global vision and local experience				
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	基礎運籌、供應鏈管理知識 Foundations on logistics and supply chain management			○	
B	運籌系統管理知識 Knowledge on logistics system management			●	

C	運籌工具方法知識 Knowledge on analytical tools and methodologies in logistics	●
D	語文表達能力 Language and communication skills	○
圖示說明 Illustration : ● 高度相關 Highly correlated ○ 中度相關 Moderately correlated		
課程大綱 Course Outline		
1. Introduction 2. Transportation Networks 3. Network Flow Models and Algorithms 4. Graph Search Algorithms 5. Maximum-Flow Problems 6. Minimum-Cost Flow Problems 7. Multicommodity Flow Problem 8. Formulating the Assignment Problem 9. User Equilibrium 10. System Optimum		
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.)		
教師以有管理科學、運輸及工業工程之專業或經驗者為宜。		
課程要求和教學方式之建議 Course Requirements and Suggested Teaching Methods		
課堂講授及討論		
其他 Miscellaneous		