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## ②國玄東華大學

		教导	學計劃表		abus				
	課程名稱(中文) se Name in Chinese	網路分析與應用			學年/學期 Academic Year/Sem	113/2			
	課程名稱(英文) se Name in English	Network Analysis and Applications							
	科目代碼 Course Code	系級 開課單位 GSLM52500 Department 硕士 Course-Offering Department					運籌管理研究所		
	修別 Type	選修 Elective 學分數/時間 Credit(s)/Hour(s) 3.0/3.0							
	授課教師 Instructor	/陳怡君							
	先修課程 Prerequisite								
課程描述 Course Description									
problem Prerequ 介紹運 量問 題,包	ms, and multi-commod ms and to obtain and uisites: Basic knowl 輸網路均衡分析(Trans 含最大流量問題(Maxin	l analyze the soledge of linear 課 Sportation Netwo	olutions. programming w 程目標 Cours ork Equilibriu n)、最小成本流	ill be a se Objecti m Analysi 量問題(Mi	plus. ves s),及常用的網路流	and IIIO	uei tilese		
条專業能力 Cor						程目標與系專業能 力相關性 relation between burse Objectives and Dept.'s Education Objectives			
A ½	基礎運籌、供應鏈管理知識Foundations on logistics and supply chain management						0		
В	運籌系統管理知識 Knowledge on logistics system management						•		
C i	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							0		
圖示說明Illustration : ● 高度相關 Highly correlated ○中度相關 Moderately correlated									
		授課進	度 表 Teaching	Schedule	& Content				
週次Week 內容 Subject/Topics						備註Remarks			

## 周次Week 内容 Subject/Topics 備註Remarks 1 Introduction to Network Models 2 Network Representations 3 Graph Search Algorithms 4 Transformations and Flow Decomposition

Shortest Paths: Label Setting and Correcting Algorithms

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6	Augmenting Path Algorithms for the Maximum Flow Problem						
7	Network Simplex Methods						
8	Network Simplex for Transportation problem						
9	期中考試週 Midterm Exam						
10	Minimum Cost Flows: Basic Algorithms						
11	Minimum Cost Spanning Trees						
12	Multi-commodity Flows						
13	Lagrangian Relaxation						
14	Network Meta-Heuristics						
15	Network Meta-Heuristics						
16	Final Presentation						
17	期末考試週 Final Exam						
18	The 18th week for alternative curriculum						
教學策略 Teaching Strategies							
✓ 課堂講授 Lecture 分組討論Group Discussion 參觀實習 Field Trip							
教 學 創 新 自 評 Teaching Self-Evaluation							
創新教學(Innovative Teaching)							
▼ 問題導向學習(PBL) ■ 團體合作學習(TBL) ■ 解決導向學習(SBL)							
■ 翻轉教室 Flipped Classroom							
社會責任(Social Responsibility)							
□ 在地實踐Community Practice □ 產學合作 Industy-Academia Cooperation							
一 跨域合作(Transdisciplinary Projects)							
──跨界教學Transdisciplinary Teaching ──跨院系教學Inter-collegiate Teaching							
□ 業師合授 Courses Co-taught with Industry Practitioners							
其它 other:							

學期成績計算及多元評量方式 Grading & Assessments									
配分項目	配分比例 Percentage	多元評量方式 Assessments							
Items		測驗 會考	實作 觀察	口頭 發表	專題 研究	創作 展演	卷宗 評量	證照 檢定	其他
平時成績(含出鉄席) General Performance (Attendance Record)									
期中考成績 Midterm Exam									
期末考成績 Final Exam									
作業成績 Homework and/or Assignments									
其他 Miscellaneous			H L IV						

評量方式補充說明

Grading & Assessments Supplemental instructions

20% Class Participation & Homework

20% Final Presentation

30% Midterm Exam

30% Final Exam.

## 教科書與參考書目(書名、作者、書局、代理商、說明)

Textbook & Other References (Title, Author, Publisher, Agents, Remarks, etc.)

Ahuja, R. K., Magnanti, T. L., Orlin, J. B., 1993. Network Flows - Theory, Algorithms, and Applications. Prentice-Hall, Englewood Cliffs, NJ.

課程教材網址(含線上教學資訊,教師個人網址請列位於本校內之網址)

Teaching Aids & Teacher's Website(Including online teaching information.

Personal website can be listed here.)

其他補充說明(Supplemental instructions)