

 **國立東華大學**
教學計劃表 Syllabus

課程名稱(中文) Course Name in Chinese	作業研究(一)			學年/學期 Academic Year/Semester	103/1
課程名稱(英文) Course Name in English	Operations Research (I)				
科目代碼 Course Code	GSLM53000	系級 Department & Year	碩士	開課單位 Course-Offering Department	運籌管理研究所
修別 Type	必修 Required	學分數/時間 Credit(s)/Hour(s)		3.0/3.0	
授課教師 Instructor	/吳政翰/陳正杰				
先修課程 Prerequisite					
課程描述 Course Description					
<p>Objective This course is designed to let the students familiar with the basic concepts of deterministic operations research, including linear programming, sensitivity analysis and duality, and integer programming. Furthermore, some useful optimization software such as LINDO and LINGO will be used to enhance the students' learning. Students will learn how to formulation and model LP/IP problems and use the software package to obtain and analyze the solution.</p> <p>Instructor 陳正杰(Chen, Cheng-Chieh) / 吳政翰(Wu, Gen-Han) Room: 管B318 /管C308 Phone: 03-863- 3168/ 03-863-3167 Email: frank542@mail.ndhu.edu.tw genhanwu@mail.ndhu.edu.tw</p>					
課程目標 Course Objectives					
深入分析在作業研究領域中關於線性規劃、整數規劃、決策分析及對局理論等有成效之個案，並對模式之建立、工具之應用及結果之延伸做探討。					
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					
授課進度表 Teaching Schedule & Content					
週次Week	內容 Subject/Topics				備註Remarks
1	Intro to Basic Linear Algebra (ch1 & 2)				Chen
2	Linear Programming (ch3)				Chen

3	Linear Programming (ch3)	Chen
4	Simplex Method and Goal Programming (ch4)	Chen
5	Simplex Method and Goal Programming (ch4)	Chen
6	Transportation Models (ch7)	Chen
7	Network Models (ch8)	Chen
8	Network Models (ch8)	Chen
9	Midterm Exam	Chen
10	國際文化節/全校運動會(停課一天)	Wu
11	Sensitivity Analysis (ch5)	Wu
12	Sensitivity Analysis and Duality (ch6)	Wu
13	Sensitivity Analysis and Duality (ch6)	Wu
14	Sensitivity Analysis and Duality (ch6)	Wu
15	Integer Programming (ch9)	Wu
16	Integer Programming (ch9)	Wu
17	Integer Programming (ch9)	Wu
18	Final Exam	Wu

教學策略 Teaching Strategies

- ☒ 課堂講授 Lecture
 ☐ 分組討論 Group Discussion
 ☐ 參觀實習 Field Trip
☐ 其他 Miscellaneous:

學期成績計算及多元評量方式 Grading & Assessments

配分項目 Items	配分比例 Percentage	多元評量方式 Assessments							
		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 General Performance									
期中考成績 Midterm Exam	30%	✓							
期末考成績 Final Exam	30%	✓							
作業成績 Homework and/or Assignments	40%	✓							
其他 Miscellaneous (_____)									

評量方式補充說明

Grading & Assessments Supplemental instructions

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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.)

Text

Introduction to Mathematical Programming, 4th edition, Winston W.L. and Venkataramanan, M., Duxbury Press, 2002.

References

1. Operations Research Models and Methods, Jensen, P.A. and Bard, J.F., Wiley, 2003.
2. Introduction to Operations Research, 9th edition, Hiller, F. S. and Lieberman, G. J., McGraw-Hill, 2009.
3. Operations Research: An Introduction, 9th edition, Taha, H.A., Prentice Hall, 2010.
4. Operations Research: Applications and Algorithms, 4th edition, Winston, W.L., Duxbury Press, 2003.
5. Linear Programming and Network Flows, 4th edition, Bazaraa, M.S., Jarvis, J.J., and Sherali, H.D., Wiley, 2009

課程教材網址 (教師個人網址請列在本校內之網址)
Teaching Aids & Teacher's Website (Personal website can be listed here.)

其他補充說明 (Supplemental instructions)

Note:

1. One-sheet note of double pages is allowed in the Midterm Exam and the Final Exam.
2. Quizzes will be tested irregularly. No make-up test will be conducted