



教學計劃表 Syllabus

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| 課程名稱(中文) Course Name in Chinese | 作業研究(一) | 學年/學期 Academic Year/Semester | 113/1 |
| 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 Course-Offering Department |
| 開課單位 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 | /陳怡君 | | |
| 先修課程 Prerequisite | | | |
| 課程描述 Course Description | | | |
| 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 tools will be used to enhance the students' learning. Students will learn how to formulation and model LP/IP problems and use the solution tools to obtain and analyze the solution. | | | |
| 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 | | | |
| 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 | Introduction | | |
| 2 | Linear Programming: Model formulation | | |
| 3 | Linear Programming: Solution tools | | |
| 4 | Linear Programming: Graphical approach/ Simplex Method | | |
| 5 | Holiday | | |
| 6 | Simplex Method | | |

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| 7 | Revised Simplex Method | |
| 8 | Sensitivity Analysis | |
| 9 | 期中考試週 Midterm Exam | |
| 10 | Parametric Programming | |
| 11 | Parametric Programming | |
| 12 | Duality theory of Linear Programming | |
| 13 | Integer Programming: Model formulation (Class suspended) | |
| 14 | Integer Programming: Solution algorithm | |
| 15 | Integer Programming: Solution algorithm | |
| 16 | Dynamic Programming/ Final Project 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
 其他 Miscellaneous:

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
 磨課師 Moocs

社會責任 (Social Responsibility)

- 在地實踐 Community Practice
 產學合作 Industry-Academia Cooperation

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 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 | | | | | | | | | |
| 期末考成績 Final Exam | | | | | | | | | |
| 作業成績 Homework and/or Assignments | | | | | | | | | |
| 其他 Miscellaneous (_____) | | | | | | | | | |
| 評量方式補充說明 Grading & Assessments Supplemental instructions | | | | | | | | | |
| 15% Class Participation & Homework 25% Final Project 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.) | | | | | | | | | |
| Textbook 1. PPT by instructor | | | | | | | | | |
| 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) | | | | | | | | | |
| Academic Integrity Academic dishonesty includes, but is not limited to, cheating, facilitating acts of academic dishonesty by others, unauthorized prior possession of exams, submitting work of another person or work previously used, or tampering with the academic work of other students. Any attempt at academic dishonesty will be prosecuted to the fullest possible extent. | | | | | | | | | |