

南臺科技大學 107 學年度第 2 學期課程資訊

課程代碼	1GM00F01
課程中文名稱	高等數量方法
課程英文名稱	Advanced Quantitative Methods
學分數	3.0
必選修	必修
開課班級	博研經管一甲
任課教師	張嘉華
上課教室(時間)	週二第 6 節(E0602) 週二第 7 節(E0602) 週二第 8 節(E0602)
課程時數	3
實習時數	0
授課語言 1	英語
授課語言 2	
輔導考照 1	
輔導考照 2	
課程概述	This course will introduce interesting and useful advanced management science techniques and methodologies those can be applied to managerial decision making. Mathematical models and optimization methods such as Linear/Integer Programming are developed and extended to cover variations in the management context to logistics, networks, financial, forecasting, inventory, and strategic planning. Other topics may include decision analysis, stochastic modelling and game theory. But the emphasis of the course will be placed on the conceptual understanding and application of the tools rather than the mathematics or the mechanics behind the tools.
先修科目或預備能力	1. Linear Algebra; 2. Management Science;
課程學習目標與核心能力之對應	
中文課程大綱	1. 數學規劃； 2. 網路模式； 3. 非線性規劃； 4. 決策分析； 5. 隨機模式； 6. 模擬； 7. 預測；

	8. 存貨； 9. 專案管理。
英/日文課程大綱	1. Linear/Integer Programming; 2. Network 3. Nonlinear Programming; 4. Decision Analysis; 5. Stochastic Models ; 6. Simulation 7. Forecasting; 8. Inventory 9. Project Management
課程進度表	Week 1. Introduction Week 3. Linear Programming Week 4. LP: Formulation& Applications Week 5. What -If Analysis for Linear Programming Week 6. Network Optimization Problems Week 8. Using Binary Integer Programming to Deal with Yes-or-No Decisions Week 9. Midterm Week 10~Week 11. Nonlinear Programming Week 12~Week 13. Decision Analysis Week 14~Week 15. Forecasting Week 15~Week 16. Queueing Models Week 16~Week 17.Simulation Week 18. Term Exam
教學方式與評量方法	
指定用書	書名：Introduction to Management Science: A Modeling and Case Studies Approach With Spreadsheets 作者：Hiller/Hiller 書局：McGraw Hill 年份：2014 ISBN：978-1-259-01067-5 版本：5
參考書籍	1. Taylor, Bernard W., Introduction to Management Science, 11 edition, Prentice Hall, 2012. 2. Anderson, David R., et el, An Introduction to Management Science: Quantitative Approaches to Decision Making, 13 edition, Cengage Learning, 2011. 3. Wolsey, Laurence A. and George L. Nemhauser, Integer and Combinatorial

	Optimization, 1st edition, Wiley-Interscience, 1999.
教學軟體	Microsoft Excel
課程規範	