國立台灣科技大學 114學年 第2學期　課程大綱

Spring 2026 NTUST Course Outline

授課教師：郭伯勳

Instructor:Po-Hsun Kuo

課程名稱：作業研究(二)

Course Title：Operations Research (2)

2026/11/3

課程代號： IM4104302 Course Code 學分數： 3 Credits	必選修：必修/半學年 Required/Electve:Required/Half Yr. 先修課程： Prerequisites
節次教室： Time/Location	R2(MA-010) R3(MA-010) R4(MA-010)
專業核心能力： Core Professional Competencies	
課程網址： Course Website	
課程宗旨： Course Objectives	Introduction to Operations Research, including (a) Optimization: Integer Programming, Nonlinear Programming and Dynamic Programming, (b) Stochastic Processes: Markov Chains, Queueing Theory and Queueing Networks.
課程大綱： Outline of Lectures	Integer Programming Integer Programming Nonlinear Programming Nonlinear Programming Markov Chains Midterm Exam 1 Markov Chains Queueing Theory (Exponential & Poisson) Queueing Theory The Application of Queueing Theory Midterm Exam 2 Queueing Network Queueing Network Dynamic Programming Dynamic Programming Final Exam
授課方式： Method of Instruction	講授 Lecture：100% 分組討論 Group discussion：0% 案例研討 Case study：0% 操做練習 Practical exercises：0% 講授 Lecture：%
教科書： Textbooks	Hillier, F. S., Lieberman, G. J., Introduction to Operations Research, 11th Ed., McGraw-Hill, 2020.
參考書目： References	Winston, W. L., Venkataramanan, M., Introduction to Mathematical Programming: Applications and Algorithms, 4th Ed., Duxbury Press, 2002. Anderson, D. R., Sweeney, D. J., Williams, T. A., An Introduction to Management Science: Quantitative Approaches to Decision Making, 10th Ed., South-Western College, 2004. Hillier, F. S., Hillier, M. S., Hillier, M., Introduction to Management Science, 2nd Ed., McGraw-Hill/Irwin, 2002.

修課須知： Notice	Honor Code are: (Virginia Tech) • That trust in a person is a positive force in making that person worthy of trust, • That every student has the right to live in an academic environment that is free from the injustices caused by any form of intellectual dishonesty, and • That the honesty and integrity of all members of the university community contribute to its quest for Truth.
評量方式： Grading	Quizzes 25% Midterm Exam 1 25% Midterm Exam 2 25% Final Exam 25%
備註說明： Notes	(Open books and notes. No electronic devices) Quizzes will cover material discussed in class, as well as reading assignments. Quizzes will be given weekly. Exams will cover material discussed in class, as well as reading assignments and quizzes. Make-up exams will be scheduled only in case of unavoidable occurrences. It is your responsibility to take the exam at the designated time. Travel arrangements are not sufficient reason to warrant a make-up exam or an incomplete grade.