

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：周碩彥

Instructor: Shuo-Yan Chou

課程名稱：工程經濟

Course Title : Engineering Economics

2026/5/5

課程代號： IM3302701 Course Code	必選修：選修/半學年 Required/Elective: Elective/Half Yr.
學分數： 3 Credits	先修課程： Prerequisites
節次教室： F6(IB-511-2) F7(IB-511-2) F8(IB-511-2) Time/Location	
專業核心能力： Core Professional Competencies	
課程網址： Course Website	
課程宗旨： Learning and practicing basic approaches for time-based economic analysis, that is, estimating, comparing and making choices based on the value of alternatives/projects spanning over time. Course Objectives	
課程大綱： Weeks Topics Outline of Lectures EEcon-1 • Overview EEcon-2 • Overview; Financial Statement and Ratios EEcon-3 • Cost and Cost Estimation; Time Value of Money EEcon-4 • Equivalence EEcon-5 • Equivalence; Benefit/Cost Ratio EEcon-6. • Holiday - No class EEcon-7 • Holiday - No class EEcon-8 • Present/Future Worth; Annual Worth; Breakeven Analysis EEcon-9 • Evaluating Mutually Exclusive Projects; Rate of Return EEcon-10 • Depreciation; Income Taxes EEcon-11 • Developing Project Cash Flow; Inflation EEcon-12 • Risk Management; Sensitivity Analysis; Decision Trees EEcon-13 • Project Presentation EEcon-14 • Midterm/Final Exam EEcon-15 • Project Presentation EEcon-16 • Final Exam Week	
授課方式： 講授 Lecture：90% Method of Instruction 分組討論 Group discussion：0% 案例研討 Case study：10% 操做練習 Practical exercises：0% 講授 Lecture：%	
教科書： William G. Sullivan, Elin M. Wicks, and C. Patrick Koelling, Engineering Economy, 16th Edition, Pearson Education, 2014. (or 17th Edition) Textbooks	
參考書目： Chan S. Park, Contemporary Engineering Economics, Prentice Hall, 4th Edition, 2010. References Leland Blank and Anthony Tarquin, Basics of Engineering Economy, McGraw Hill, 2007	

修課須知： Groups are formed for the purpose of pre-class discussion and projects.
Notice Each group is allowed with up to 3 students. A group leader/champion needs to coordinate the activities within the group as well as to serve as the window of contact.

評量方式： There will be a midterm written exam, a closed-book exam except for an
Grading A4 double sided cheat sheet. Non-programmable calculators are allowed to be used for the exam.
Class attendance 10%
Homework 30%
Midterm 30%
Project 30%

備註說明： 修課須知：
Notes Two homework will be assigned and will be due on the next class time. Each project report/presentation needs to have three main elements: project statement (an engineering economic problem), economic analysis (analysis detained in spreadsheet and justification), recommended alternative with managerial insights. Project topics are open. Project reports will be presented at the end of the semester.

授課方式：
Method of Instruction：
講授Lecture：70%、案例研討Case study：20%、操作練習Practical exercises：20%