

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：林正祥

Instructor: LIN, JENG-HSIAN

課程名稱：材料力學演算

Course Title : Recitation for Strength of Materials

2026/5/6

課程代號： CT1004701 Course Code 學分數： 1 Credits	必選修：選修/半學年 Required/Elective: Elective/Half Yr. 先修課程： Prerequisites
節次教室： T3(IB-409-1) T4(IB-409-1) Time/Location	
專業核心能力： Core Professional Competencies	
課程網址： Course Website	
課程宗旨： Course Objectives	本課程是土木工程專業本科生的專業基礎課程，也是學習結構分析與設計理論與方法的先修課程。透過本課程，學生將學習材料力學原理的理論與應用。透過大量的範例演算強化學生在材料力學方面的概念和計算能力。 This course is a fundamental course for undergraduate students majoring in civil engineering, and a prerequisite for learning the theory and methods of structural analysis and design. Through this course, students will learn the theory and application of the principles of mechanics of materials. Numerous example calculations will strengthen students' conceptual and computational abilities in mechanics of materials.
課程大綱： Outline of Lectures	1. 面積的幾何性質 Geometric Properties of an Area 2. 材料的應力、應變及機械性質 Stress, Strain, and Mechanical Properties of Materials 3. 軸力、扭轉、彎曲及橫向剪力 Axial load, Torsion, Bending, and Transverse Shear 4. 應力轉換、應變轉換 Stress Transformation and Strain Transformation 5. 樑的撓曲 Deflection of Beams 6. 能量法 Energy Methods
授課方式： Method of Instruction	講授 Lecture : 80% 分組討論 Group discussion : 0% 案例研討 Case study : 0% 操做練習 Practical exercises : 20% 講授 Lecture : %
教科書： Textbooks	1. Russell C. Hibbeler, Mechanics of Materials, SI, 8th Edition, Publisher: Prentice Hall (高立圖書) 2. Daryl L. Logan, Mechanics of Materials, Publisher: HarperCollins (文京圖書)
參考書目： References	
修課須知： Notice	

評量方式： 出席率(Attendance)10%，作業(Homework)20%，期中考試(Mid-term
Grading Exam.)35%，期末考試(Final Exam.)35%。

備註說明：
Notes