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：趙振綱

Instructor:Ching-Kong Chao

課程名稱：彈性力學

Course Title：Theory of Elasticity

2026/11/3

課程代號： ME5103701 Course Code 學分數： 3 Credits	必選修：選修/半學年 Required/Electve:Elective/Half Yr. 先修課程： Prerequisites
節次教室： Time/Location	R2(E1-306) R3(E1-306) R4(E1-306)
專業核心能力： Core Professional Competencies	
課程網址： Course Website	
課程宗旨： Course Objectives	引言，張量表示法，應力與應變之張量表示，直角座標二度空間彈性問題，極座標二度空間彈性問題，棒的扭轉，樑與板理論介紹，三度空間彈性問題，應用變分法於彈力數值分析。 This class provides the students with analytical tools to deal with engineering problems including two-dimensional and three-dimensional elastcity problems.
課程大綱： Outline of Lectures	Chapter 1: Mathematical preliminaries Chapter 2: Stress Chapter 3: Deformation and strain Chapter 4: Elasticity and its limits Chapter 5: Formulation and exact solutions of some linear elasticity problems Chapter 6: Structural mechanics
授課方式： Method of Instruction	講授 Lecture：60% 分組討論 Group discussion：0% 案例研討 Case study：20% 操做練習 Practical exercises：20% 講授 Lecture：%
教科書： Textbooks	Elasticity: Theory and Applications by Herbert Reismann and Peter S. Pawlik
參考書目： References	Advanced Strength and Applied Elasticity by A.C. Ugural and S.K. Fenster
修課須知： Notice	This class will be assisted with teaching assistant
評量方式： Grading	1st mid-term exam 25% 2nd mid-term exam 25% Final exam 50%
備註說明： Notes	Engineering Mathematics, Strength of Materials