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：李雨青

Instructor:Lee, Yu-Ching

課程名稱：靜力學

Course Title：Statics

2026/11/3

課程代號： GD2103302 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	R8(TR-510) T8(TR-510) T9(TR-510) W10(TR-510)
專業核心能力： Core Professional Competencies	培養學生空間位置與力及力矩的表示與分解結合、質點及剛體力平衡之條件等各項核心能力。
課程網址： Course Website	
課程宗旨： Course Objectives	本課程旨為介紹工程力學中的靜力學概念。靜力學主要探討質點和剛體系統於二維和三維中靜力平衡時的結構受力情況。課程內容涵蓋集中力與分佈力、重心與形心、慣性矩等主題。本課程將著重於桁架、結構、梁和繩索中的受力分析。對於機械工程的學生來說，靜力學是基礎的工程課程，在機械工程或土木工程等領域，靜力學在結構設計與分析中非常重要，因為結構在承受負載或工作時，其外觀形狀必須保持不變，並且本門課程中的會忽略結構的動態行為(無系統加速度力），因此探討靜力問題會考慮忽略系統的加速度；本門課程亦為材料力學和機械設計的基礎知識，期望同學課前課後做好預習和複習的工作 This course is designed to give you an introduction to engineering mechanics in static systems. Statics deals with two- and three-dimensional systems of particles and rigid bodies in static equilibrium. Additional topics include concentrated and distributed forces, centers of gravity and centroids, and moments of inertia. Special attention is devoted to forces in frames, structures, beams, and cables. For many of you, this will be your ?rst engineering course. In ?elds such as mechanical or civil engineering, statics is indispensable in the design and analysis of structures that must hold their shape while bearing a load or performing a task where dynamic forces (forces arising from acceleration of the system) are absent or negligible.
課程大綱： Outline of Lectures	本課程旨為介紹工程力學中的靜力學概念。靜力學主要探討質點和剛體系統於二維和三維中靜力平衡時的結構受力情況。課程內容涵蓋集中力與分佈力、重心與形心、慣性矩等主題。本課程將著重於桁架、結構、梁和繩索中的受力分析。對於機械工程的學生來說，靜力學是基礎的工程課程，在機械工程或土木工程等領域，靜力學在結構設計與分析中非常重要，因為結構在承受負載或工作時，其外觀形狀必須保持不變，並且本門課程中的會忽略結構的動態行為(無系統加速度力），因此探討靜力問題會考慮忽略系統的加速度；本門課程亦為材料力學和機械設計的基礎知識，期望同學課前課後做好預習和複習的工作 This course is designed to give you an introduction to engineering mechanics in static systems. Statics deals with two- and three-dimensional systems of particles and rigid bodies in static equilibrium. Additional topics include concentrated and distributed forces, centers of gravity and centroids, and moments of inertia. Special attention is devoted to forces in frames, structures, beams, and cables. For many of you, this will be your ?rst engineering course. In ?elds such as mechanical or civil engineering, statics is indispensable in the design and analysis of structures that must hold their shape while bearing a load or performing a task where dynamic forces (forces arising from acceleration of the system) are absent or negligible.
	講授 Lecture：100%

授課方式： Method of Instruction	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	Engineering Mechanics, Statics, 15th Edition in SI Units, by R. C. Hibbeler
參考書目： References	
修課須知： Notice	演算課時間 : 週三W10 TA:許峻睿　校內分機　5323　Email : M11403111@mail.ntust.edu.tw
評量方式： Grading	期中考　40%　期末考　40%　小考(平時成績)20%
備註說明： Notes	微積分