

朝陽科技大學 094學年度第1學期教學大綱
Mechanics of Material 材料力學

當期課號	3345	Course Number	3345
授課教師	楊麗文	Instructor	YANG,LIWEN
中文課名	材料力學	Course Name	Mechanics of Material
開課單位	營建工程系(二進)三A	Department	
修習別	選修	Required/Elective	Elective
學分數	3	Credits	3
課程目標	材料力學為土木工程之重要基礎學科，舉凡土壤力學、鋼筋混凝土學、結構學.....等，均需具備良好的材料力學觀念，本課程旨在建立營建系學生所需具備之材料力學基礎，主要包括拉力、壓力、扭力、剪力、彎曲力矩、應力、應變、撓度及柱等。	Objectives	Mechanics of materials is a basic subject in construction engineering. This course provides an opportunity to accomplish two things: first, to teach students a basic engineering subject and, second, to develop their analytical and problem-solving abilities. The main topics of this course include the analysis and design of structure members subjected to axial loads, torsion, shear and bending, as well as such fundamental concepts as stress, strain, elastic and inelastic behavior. Other topics of general interest are the transformations of stress and strain, deflection of beams and behavior of columns, and so on.
教材	"材料力學"精簡版,編譯者/鄭祥誠.沈勇全.彭世明.曾建榮.簡國雄,出版者/高立圖書有限公司,2002. 本教科書乃翻編自 "Mechanics of Materials"2nd ed., by R.C. Hibbeler, Prentice Hall international edition.	Teaching Materials	
成績評量方式	1.平時成績(小考,出席,課堂表現)40%, 2.期中考30%, 3.期末考30%	Grading	1.Quiz and attendance, 40%. 2.Midterm Examination, 30%. 3.Final Examination, 30%.
教師網頁	-		
教學內容	章 1.應力與應變. 2.材料之力學性質. 3.軸向荷載. 5.彎曲. 6.橫向剪力. 8.應力轉換與應變轉換. 9.樑軸之撓曲與柱之挫曲. 10.能量法.	Syllabus	Chapter. 1.Stress and strain. 2.Mechanical properties of materials. 3.Axial load. 5.Bending. 6.Transverse shear 8.Stress transformation and Strain transformation 9.Deflections of Beams and Shafts, Buckling of Columns. 10.Energy methods.

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