

朝陽科技大學 095學年度第1學期教學大綱
Mechanics of Material 材料力學

當期課號	3394	Course Number	3394
授課教師	程運達	Instructor	YUN,TA CHENG
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"第六版,譯者/黃淳權,出版者/滄海書局,2005. 本教科書譯自 "Mechanics of Materials"6th ed., by R.C. Hibbeler	Teaching Materials	Authorized translation from the English language edition, entitled "Mechanics of Materials"6th ed., by Hibbeler, RUSSELL C..
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	1.應力 2.應變. 3.材料之力學性質. 4.軸向荷載. 5.扭矩 6.彎曲. 7.橫向剪力. 8.複合載重 9.應力轉換 10.應變轉換. 11.樑的設計 12.樑之撓曲 13.柱之挫曲. 14.能量法.	Syllabus	1.Stress 2.Strain. 3.Mechanical properties of materials. 4.Axial load. 5.Torsion 6.Bending. 7.Transverse shear 8.Compound load 9.Stress transformation 10.Strain transformation 11.Beam design 12.Deflections of Beams and Shafts 13.Buckling of Columns. 14.Energy methods.

尊重智慧財產權，請勿非法影印。