朝陽科技大學 093學年度第2學期教學大綱
Mechanics of Material 材料力學

當期課號	1014	Course Number	1014
授課教師	余志鵬	Instructor	YU,CHIH PENG
中文課名	材料力學	Course Name	Mechanics of Material
開課單位	營建工程系(四日)一B	Department	
修習別	必修	Required/Elective	Required
學分數	3	Credits	3
課程目標	材料力學爲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	「Mechanics of Materials」,5th edition, James M. Gere,新月圖書，台北，(中文版)	Teaching Materials	
成績評量方式	1.二次期中考、一次期末考：25分 x 3 = 75分 2.平時考若干次：25分 3.平時成績：10分（含出席、課堂表現、問題提問、特殊事績）	Grading	two mid-term exams(25% each), one final exams(25%), quizs(25%), class performance(add 10%)
教師網頁			
教學內容	第1-3週 第一章 拉力、壓力、剪力 第二章 軸向載重構件 第4-6週 第二章 軸向載重構件 第三章 扭力 第7-9週 第四章 剪力及彎曲力矩第五章 樑中應力(基礎篇) 第10-12週 第五章 樑中應力(基礎篇) 第六章 樑中應力(高級篇) 第13-15週 第七章 應力及應變分析 第16-18週 第十一章 柱	Syllabus	Weeks 1-3 1.Tension, Compression, and Shear 2.Axially Loaded Members Weeks 4-6 2.Axially Loaded Members 3.Torsion Weeks 7-9 4.Shear Forces and Bending Moments 5.Stresses in Beams (Basic Topics) Weeks 10-12 5.Stresses in Beams (Basic Topics) 6.Stresses in Beams (Advanced Topics) Weeks 13-15 7.Analysis of Stress and Strain Weeks 16-18 11.Columns

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