# 朝陽科技大學 091學年度第1學期教學大綱
# Mechanics of Material 材料力學

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| **當期課號** | 1161 | **Course Number** | 1161 |
| **授課教師** | 陳清山 | **Instructor** | CHEN,CHING SHAN |
| **中文課名** | 材料力學 | **Course Name** | Mechanics of Material |
| **開課單位** | 建築系(四日)二A | **Department** | |
| **修習別** | 必修 | **Required/Elective** | Required |
| **學分數** | 2 | **Credits** | 2 |
| **課程目標** | 使學生瞭解建築材料的一些基本性質並能學習以簡單及邏輯的思考方式來分析結構問題。此外，並可訓練同學於建築設計時如何思考其結構系統。課程內容主要有應力與應變、扭矩、純彎矩、橫向負載、組合負載以及柱子的穩定性等概念，亦包含一些較特殊的主題如:溫度效應以及靜不定結構問題。完成此門課程之後，可將這些知識用於其建築設計上，並具有與結構技師溝通的能力，以共同完成有創意、不可思議的建築物造型。 | **Objectives** | In this course of Engineering Materials, students can learn some fundamental engineering subjects while at the same time developing their analytical and problem-solving abilities. In addition, this course can train students how to analyze structural systems, and many of the problems requires that students do some original thinking.This course covers some basic topics of Engineering Materials. The principal topics are the analysis of structural members subjected to tension, compression, pure bending and torsion, including such fundamental concepts as stress, strain, elastic behavior and strain energy. Other topics include the transformations of stress and strain, transverse loading, combined loading, the concept of stress concentrations and the stability of columns. More specialized topics are thermal effects and statically indeterminate structures. When that students accomplish this course. They can use these concepts on their architectural design. Besides, they can use this knowledge to communicate with structural engineers to build some incredible architectural forms. |
| **教材** | 口述、板書、講義、錄影帶 | **Teaching Materials** | |
| **成績評量方式** | 一、平時成績（作業習題、課堂點名）35% 二、期中考試30% 三、期末考試35% | **Grading** | |
| **教師網頁** | | | |
| **教學內容** | 一、緒言-應力的概念二、應力與應變三、扭矩（torsion）四、純彎矩（pure bending）五、橫向負載（transverse loading）六、 柱（columns） | **Syllabus** | |

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