朝陽科技大學 096學年度第1學期教學大綱
Introduction to Experimental Methods 實驗方法導論

當期課號	7138	Course Number	7138
授課教師	干裕成	Instructor	KAN,YU CHENG
中文課名	實驗方法導論	Course Name	Introduction to Experimental Methods
開課單位	營建工程系碩士班一A	Department	
修習別	選修	Required/Elective	Elective
學分數	3	Credits	3
課程目標	使學生瞭解基本DC與AC電路理論，及對一般應變、位移、應力、壓力、流速、溫度、濕度、扭力、PH值等量測儀器設計原理有一基本認識，另外，也對先進應變資料處理器與示波器之原理及應用，作一基本介紹，期使同學能進一步在結構物上，做物理與力學行爲之量測和分析。	Objectives	Theory, methods, and techniques for experimental studies of structural members and systems. Measurement fundamentals; transducers for measuring strain, displacements, force and torque, pressure, and temperature. Physical modeling principles; similitude, materials and their properties, and loading systems for application to studies of elastic and inelastic models. Case studies. Individual project required of each student.
教材	上課筆記，試驗報告，參考文章等 Mechanical Measurements (5th) 作者：Bechwith/Marangoni/Lienhard V	Teaching Materials	Class notes, Test reports,Reference papers, and Mechanical Measurements (5th)： Bechwith/Marangoni/Lienhard V
成績評量方式	平時表現(10%)、作業(15%)、實驗專題及報告(15%)、期中考(30%)、期末考(30%)	Grading	Response(10%), homework(15%), project and report(15%), midterm(30%), final exam (30%)
教師網頁			
教學內容	本課程教學內容主要包括基本平面彈性理論・破壞理論・常用量測儀器及MTS試驗系統介紹及應用・試驗及儀具校正・實驗專題・實驗設計與分析簡介・統計應用	Syllabus	This course will introduce the fundemental plane elastic theory, failure theory, basic measuring instrument or sensors, MTS testing system and their applications. Calibration and statistical technique will also be addressed. Student take this course will design and complete a testing project alone.