

97-2 Preliminary Syllabus, Da-Yeh Univ

Information			
Title	壓電材料原理與應用	Serial No. / ID	1272 / MUR5030
Dept.	機械與自動化工程學系碩士班	School System / Class	研究所碩士班1年1班
Lecturer	鄭江河	Full or Part-time	專任
Required / Credit	Optinal / 3	Graduate Class	NO
Time / Place	(一)C / H227-3(三)23 / H227-3	Language	English

Introduction
<p>Theory and Application of Piezoelectric Materials is a fundamental course connecting theory and applications with practical problems. This course will provide students a thorough understanding of the elements of vector and tensor notation, theory of stress, deformation and strain, the linear theory of piezoelectricity, Hamilton ' s principle, material symmetry consideration, ElectroMechanical coupling coefficient and exact solution of piezoelectric. The adequate ability to develop the mathematical model and to analyze the engineering system will be developed.</p>

Outline
<ol style="list-style-type: none"> 1. Elements of vector and tensor notation 2. Theory of stress 3. Deformation and strain 4. Electromagnetic equations 5. The linear theory of piezoelectricity 6. Hamilton ' s principle 7. Material symmetry consideration 8. ElectroMechanical coupling coeffician 9. Example for the exact solution of piezoelectric

Prerequisite
Calculus, Engineering Mathematics, Elasticity