

100-2 Preliminary Syllabus, Da-Yeh Univ

| Information | | | |
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| Title | 壓電材料原理與應用 | Serial No. / ID | 1190 / 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 | (二)ABC / H466 | Language | English |

| Introduction |
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| 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. |

| Outline |
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| <ol style="list-style-type: none">1. Elements of vector and tensor notation2. Theory of stress3. Deformation and strain4. Electromagnetic equations5. The linear theory of piezoelectricity6. Hamilton ' s principle7. Material symmetry consideration8. ElectroMechanical coupling coeffician9. Example for the exact solution of piezoelectric |

| Prerequisite |
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| Calculus, Engineering Mathematics, Elasticity |