

100-2 Preliminary Syllabus, Da-Yeh Univ

Information			
Title	材料分析技術與實作	Serial No. / ID	0652 / EEI3120
Dept.	電機工程學系	School System / Class	大學日間部3年1班
Lecturer	李得勝	Full or Part-time	專任
Required / Credit	Optinal / 3	Graduate Class	No
Time / Place	(四)234 / H340	Language	Chinese

Introduction	
<p>A. Department of Electrical Engineering Da-Yeh University, the aims of education (Educational Objectives)</p> <ol style="list-style-type: none"> 1. Basic: teaching basic knowledge of mathematics and information. 2. Professional: professional and technical training in electrical engineering. 3. Integration: Strengthening the integration of technology application and training. 4. International outlook: foreign language skills, culture and international perspective. <p>B. Department of Electrical Engineering Da-Yeh University, Education core competencies (Educational Outcomes)</p> <ol style="list-style-type: none"> 1.1 has a basic knowledge of mathematics and ability. 1.2 has a physical basis of knowledge and skills. 1.3 has a basic knowledge of information technology and capability. 2.1 with electrical engineering expertise and application capability. 3.1 with data collection, simulation analysis, experimental design and problem solving ability. 3.2 necessary for engineering practice and implement the technical ability. 4.1 English with basic motor skills. 4.2 understanding of domestic motor development trend of related industries and pulse. 4.3 fully recognizes the importance of professional ethics, understanding of engineering technology on the environment, social and global implications, fulfilling the social responsibility of engineers. <p>Course Objectives:</p> <p>Understanding of materials technology background, materials and applications and material analysis technology, and the basic ability to do a hands-on (A2, B2.1.B3.1, B3.2)</p>	

Outline	
<ol style="list-style-type: none"> 1. Materials Analysis Technology Overview 2. material analysis technology - scanning probe microscopy 3. metallographic optical microscope analysis 4. Material analysis - electron microscopy 5. Materials-X-ray diffraction analysis 6. Atomic Spectroscopy 7. packet materials to do real analysis - sample preparation and optical diffraction 8. packet materials to do real analysis - sample preparation and X-ray diffraction 9. packet materials to do real analysis - sample preparation and electron microscopy 10. packet materials to do real analysis - sample preparation and scanning probe microscopy 	

11. packet thickness analysis - sample preparation and instrument operation
12. Grouping atoms AAS, ICP spectroscopy

Prerequisite

General Physics and Physics Experiments