

99-2 Preliminary Syllabus, Da-Yeh Univ

Information			
Title	燃料電池工程	Serial No. / ID	1890 / ADR5025
Dept.	機械與自動化工程學系博士班	School System / Class	研究所博士班1年1班
Lecturer	鄭錕燦	Full or Part-time	專任
Required / Credit	Optinal / 3	Graduate Class	No
Time / Place	(二)2 / H546 (三)34 / H546	Language	English

Introduction
<p>Fuel cell is the rising star in green energy technology. It can replace the internal combustion engine as the driving power of automobiles and can be used in 3C products. This course gives students the opportunity to learn the fuel cell technology and to make students get ready for the coming age of fuel cells.</p> <p>The objectives of this course are:</p> <ol style="list-style-type: none"> 1. to provide students with the capability of mathematics & physics analysis and put them in application. 2. to make students own the capability of applying the conservation of energy to fuel cells. 3. to provide students with the knowledge of the fundamental principles of fuel cells, electrochemical theory related to fuel cells, the calculation of fuel cell efficiency and the structure/characteristics of various kind of fuel cells.

Outline
<p>Unit 1: Introduction</p> <p>Unit 2: Efficiency and open circuit voltage</p> <p>Unit 3: Operational fuel cell voltage</p> <p>Unit 4: Proton exchange membrane fuel cells</p> <p>Unit 5: Alkaline Electrolyte Fuel Cells</p> <p>Unit 6: Direct methanol fuel cells</p> <p>Unit 7: Fueling fuel cells</p> <p>Unit 8: Delivering fuel cell power</p> <p>Unit 9: Fuel cell systems analyzed</p>

Prerequisite
English, chemistry, thermodynamics.