

朝陽科技大學 094學年度第2學期教學大綱  
Material Chemistry 材料化學

當期課號	7111	Course Number	7111
授課教師	楊聰仁	Instructor	YANG,TSONG JEN
中文課名	材料化學	Course Name	Material Chemistry
開課單位	應用化學系碩士班二A	Department	
修習別	選修	Required/Elective	Elective
學分數	3	Credits	3
課程目標	本科目著重在以化學方法製備各種材料，如：電子材料、半導體材料、陶瓷材料、磁性材料與特殊金屬材料，同時探討材料在化學上之應用，例如：氣體吸附、催化反應等，使學生瞭解材料與化學跨領域的學理應用。	Objectives	This course is aimed at Chemical preparations of electronic materials, semiconductor materials, ceramic materials, magnetic materials, and special metallic materials, Chemical applications of materials is another topic of this course, especially adsorption of gases, catalytic reactions. The interdisciplinary training between materials science and Chemistry will be offered for students during course study.
教材	1. G. C. Bond, Heterogeneous Catalysis: Principles and Applications (2nd ed., Oxford Science Publications, 1987). 2. Drew Myers, Surfaces, Interfaces, and Colloids (2nd. ed., Wiley-VCH, 1999)	Teaching Materials	
成績評量方式	平時測驗, 40% ; 期中考, 30% ; 期末考, 30% .	Grading	Quizes, 40% ; Mid-term Exam. 30% ; Final Exam. 30%
教師網頁	-		
教學內容	1. 催化反應基本原理 2. 固體表面吸附 3. 金屬表面之化學吸附 4. 催化反應動力學 5. 異相催化反應 6. 石化工業之觸媒應用 7. 觸媒材料: 金屬, 氧化物, 載體, 添加劑	Syllabus	1. Basic Principles of Catalysis 2. Adsorption on Solid Surfaces 3. Chemisorption at Metal Surfaces 4. Kinetics of Catalyzed Reactions 5. Heterogeneous Catalysis 6. Catalysis in the Petrochemical Industry 7. Catalyst Materials: Metals, Oxides, Support, Additives.

尊重智慧財產權，請勿非法影印。