朝陽科技大學 096學年度第1學期教學大綱
Principle of Environmental Physics and Chemistry 環境物理化學原理

當期課號	7727	Course Number	7727
授課教師	程淑芬	Instructor	CHENG,SHU FEN
中文課名	環境物理化學原理	Course Name	Principle of Environmental Physics and Chemistry
開課單位	環境工程與管理系碩士在職專班一A	Department	
修習別	選修	Required/Elective	Elective
學分數	3	Credits	3
課程目標	本課程主要介紹物理及化學的一些基本概念，提供給碩士班學生一些基本研究理論。內容包括基本化學、物質的組成及結構、化學反應及其量化、純物質及其溶液的狀態、化學反應的種類及其他包括核化學、有機化學及生物化學等。	Objectives	The course was to introduce the basic concepts of physical and chemistry for graduated students to learn some fundamental theories for research. It including the foundations of chemistry, the composition and the structure of matter, chemical changes and quantities involved, the states of pure matter and solutions, types of chemical reactions and how they occur, and special topics includes nuclear chemistry, organic chemistry and biochemistry.
教材	Malone, Basic concepts of chemistry, 7th edition, WileyHill and Kolb, Chemistry for changing times, 9th edition, Prentice Hall.Sawyer and McCarty, Chemistry for environmental engineeringBenefield, Process chemistry for water and wastewater treatment,	Teaching Materials	Malone, Basic concepts of chemistry, 7th edition, WileyHill and Kolb, Chemistry for changing times, 9th edition, Prentice Hall.Sawyer and McCarty, Chemistry for environmental engineeringBenefield, Process chemistry for water and wastewater treatment,
成績評量方式	期中考30%;期末報告30%；作業及平常成績40%	Grading	Midterm 30%; final-reporting 30%; homework 40%.
教師網頁	_		
教學內容	本課程主要教授在環境領域研究上所需必備之基礎化學及物理原理,適合沒有物理化學背景,或是基礎較弱之同學選修。	Syllabus	This course will introduce the basic principles of chemistry and physically which are needed in researching at environmental area. It fits students they are absent the background.

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