朝陽科技大學 096學年度第1學期教學大綱
Structure of Atoms and Molecules 原子分子結構

當期課號	1613	Course Number	1613
授課教師	謝定國	Instructor	HSIEH,DEAN KUO
中文課名	原子分子結構	Course Name	Structure of Atoms and Molecules
開課單位	應用化學系(四日)二A	Department	
修習別	選修	Required/Elective	Elective
學分數	3	Credits	3
課程目標	本課程涵蓋二部份：一是量子力學的簡單介紹，包括電磁輻射的光子性質，Schrodinger's equation、作用子以及期望值等等；其次是應用這些量子力學的觀念來了解原子的電子組態、元素週期表、化學鍵、分子的結構等。	Objectives	This course covers fundamental concepts of quantum mechanics: photon properties of electromagnetic radiation, Schrodinger's equation , operator methods, and expectation values. Basic applications of the following are discussed: one-dimensional potentials(harmonic oscillator), three-dimensional centrosymetric potentials(hydrogen atom), many-electron atoms and the periodic table , chemical bonds and molecular structure.
教材	(1) T Engel and P Reid (2006) "Physical Chemistry" (2) G.L.Miessler and D.A.Tarr (2004) "Inorganic Chemistry", 3nd edition.	Teaching Materials	(1) T Engel and P Reid (2006) "Physical Chemistry" (2) G.L.Miessler and D.A.Tarr (2004) "Inorganic Chemistry", 3nd edition.
成績評量方式	每3週1次小考，1次期中考，1次期末考。 總成績60分以下不及格。	Grading	Mid Exam (20%), Final Exam (20%), and 4 Quizzes (60%).
教師網頁	_		
教學內容	原子結構; 簡單的鍵結理論; 對稱與群論; 分子軌域.	Syllabus	Atomic Structures; Simple Bonding Theory; Symmetry and Group theory; Molecular Orbitals.

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