朝陽科技大學 099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	1665	Course Number	1665
授課教師	錢偉鈞	Instructor	CHIEN,WEI JYUN
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B	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	P. Atkins and J. de Paula (2006) "Physical Chemistry" 8th edition	Teaching Materials	P. Atkins and J. de Paula (2006) "Physical Chemistry" 8th edition
成績評量方式	4 次小考 (60%)，一次期中考 (20%)，一次期末考 (20%)。	Grading	4 quizzes (60%) and mid exam (20%)，final exam (20%)。
教師網頁	_		
教學內容	(1)Molecules in motion; (2)The rates of chemical reactions; (3) The kinetics of complex reactions; (4) Molecular reaction dynamics; (5)Processes at solid surfaces; (6)Introduction of macromolecules, aggregates and the solid state.	Syllabus	(1)Molecules in motion; (2)The rates of chemical reactions; (3) The kinetics of complex reactions; (4) Molecular reaction dynamics; (5)Processes at solid surfaces; (6)Introduction of macromolecules, aggregates and the solid state.

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