

朝陽科技大學 094學年度第2學期教學大綱
Protein NMR 蛋白質核磁共振光譜

當期課號	7110	Course Number	7110
授課教師	錢偉鈞	Instructor	CHIEN,WEI JYUN
中文課名	蛋白質核磁共振光譜	Course Name	Protein NMR
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	本課程主要目標為介紹核磁共振光譜技術在蛋白質體相關研究之原理背景、實驗方法、圖譜分析及應用實例。4課程之主要重點包括：多為核磁共振光譜技術與蛋白質構型；(2)磁場梯度實驗與結合常數；(3)弛豫時間與結構彈性。	Objectives	The main purpose of this course is to introduce the application of NMR techniques onto the proteomic studies. Theory and background for both NMR spectrometry and proteomics; experimental aspects, spectra analysis and application will be introduces. Topics about (1) multi-dimensional spectra and conformation of protein; (2) association constant measurement and pulsed-field –gradient techniques and (3) flexibility and relaxation time measurement are included.
教材	1.Modern NMR Techniques for Chemistry Research Andrew E. Derome; Pergamon Books Ltd. 1987.; 2.150 and more Basic NMR Experiments a practical Course; S. Braun, H.-O. Kalinowski, S. Berger; Wiley-VCH.;	Teaching Materials	2.150 and more Basic NMR Experiments a practical Course; S. Braun, H.-O. Kalinowski, S. Berger; Wiley-VCH.;
成績評量方式	總分100：筆試：期中考與期末考各佔25%。合計50%。操作：30%。期末報告：佔20%。	Grading	Test:50%; Experiments:30%; Final presentation:20%.
教師網頁	http://www.cyut.edu.tw/~wjchien		
教學內容	蛋白質構型與功能 核磁共振之基本原理與應用 核磁共振光譜儀硬體介紹 多維核磁共振光譜在蛋白質研究之應用 弛豫效應原理及測量 磁場梯度技術原理與應用	Syllabus	1.Structure and function of protein; 2.Origin of NMR signals; 3.Introduction to the spectrometer; 4.Applications of 1D and 2D NMR experiments to protein study; 5.Principles and measurements of relaxation time; 6.Pulsed-Field-Gradient NMR techniques

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