朝陽科技大學 096學年度第2學期教學大綱
Instrumental Analysis in Biochemistry 生化儀器分析

當期課號	7251	Course Number	7251
授課教師	錢偉鈞	Instructor	CHIEN,WEI JYUN
中文課名	生化儀器分析	Course Name	Instrumental Analysis in Biochemistry
開課單位	生化科技研究所博士班一A	Department	
修習別	選修	Required/Elective	Elective
學分數	3	Credits	3
課程目標	本課程將含蓋當前生化研究中各項儀器分析技術之理論及其應用趨勢，課程將著重於光譜分析技術，層析技術外也包含質譜分析技術及核磁共振技術。	Objectives	The class will cover the theory and trends of application of instrumental methods used in advanced biochemical science. The course will emphasize spectroscopic, chromatographic instruments as well as nuclear magnetic resonance and mass spectroscopy.
教材	1.“Bioanalytical Chemistry”, Andreas Mans, Nicole Pamme and Dimitri Lossifidis, Imperial College Press, 2004. 2.“Biomolecular NMR spectroscopy”, Jeremy N.S. Evans, Oxford University Press, 1995. 3.“NMR of Macromolecules – a practical approach”, edited by G. C. K. Roberts, IRL Press, 1993. 4.“Biophysical and biochemical aspects of fluorescence spectroscopy”, edited by T. Gregory Dewey, Plenum Press, 1991. 5.“Principles of fluorescence spectroscopy”, Joseph R. Lakowicz, Kluwer Academic / Plenum, 1999. 6.“Circular dichroism: principles and applications”, edited by Nina Berova, Koji Nakanishi, Robert W. Woody, Wiley-VCH , c2000 7.“Infrared and Raman spectroscopy : methods and applications”, Bernhard Schrader, VCH , c1994 8.“Molecular Fluorescence: Principles and Applications”, Bernard Valeur, Wiley-VCH Verlag GmbH, 2001.	Teaching Materials	1.“Bioanalytical Chemistry”, Andreas Mans, Nicole Pamme and Dimitri Lossifidis, Imperial College Press, 2004. 2.“Biomolecular NMR spectroscopy”, Jeremy N.S. Evans, Oxford University Press, 1995. 3.“NMR of Macromolecules – a practical approach”, edited by G. C. K. Roberts, IRL Press, 1993. 4.“Biophysical and biochemical aspects of fluorescence spectroscopy”, edited by T. Gregory Dewey, Plenum Press, 1991. 5.“Principles of fluorescence spectroscopy”, Joseph R. Lakowicz, Kluwer Academic / Plenum, 1999. 6.“Circular dichroism: principles and applications”, edited by Nina Berova, Koji Nakanishi, Robert W. Woody, Wiley-VCH , c2000 7.“Infrared and Raman spectroscopy : methods and applications”, Bernhard Schrader, VCH , c1994 8.“Molecular Fluorescence: Principles and Applications”, Bernard Valeur, Wiley-VCH Verlag GmbH, 2001.
成績評量方式	三份期中報告,各佔20%,共計60% 期末報告40% 總分100	Grading	Total score 100 Three midterm reports 60% (20% each) final report 40%
教師網頁	http://www.cyut.edu.tw/~wjchien		
教學內容	紅外光光譜原理與應用 紫外/可見光光譜原理與應用 螢光光譜原理與應用 圓二色光譜原理與應用 質譜儀特論 層析技術特論 黴菌毒素分析特論	Syllabus	1. Theory and application of Infrared spectroscopy; 2. Theory and application of UV/VIS spectroscopy; 3. Theory and application of Circular Dichroism; 4. Theory and applicaion of nuclear magnetic resonance spectroscopy; 5. Speccial Topic in MASS Spectroscopy; 6. Special Topic in Chromatography; 7. Special Topic in Mycotoxin Analysis