

處理學期(Current Semester)：1091

請尊重智慧財產權，請勿非法影印

1091學期所開設課程『蛋白質體學』的課程內容

課程代碼(Course Number)	M32010PN
授課老師(Instructor)	陳泰源(Tai-Yuan Chen)
中文課名(Chinese Course Title)	蛋白質體學
英文課名(English Course Title)	Proteomics
開課年班(Grade and Class)	1A
選課人數(Quantity)	5
選課類別(Course Type)	選修(Elective Course)
上課時間(Course Meeting Days/Times)	402,403,404
上課地點(Classroom)	CLS211,CLS211,CLS211
開課系所(Department/Institute Office of Course)	食品科學系碩士班(Food Science)
學分(Credit(s))	3
人數上限(Maximum Number of Students)	15
開課期別(Course Type)	單學期(semester course)
是否實習	否
備註(Note)	

課程綱要

教學目標	中文	<ol style="list-style-type: none"> 藉由課堂上學習的基本知識，幫助學生在未來能自修及拓展領域 瞭解基因體學、蛋白質體學、生物資訊學間的關係 瞭解功能性蛋白質在特定生理功能或遺傳缺陷上扮演的角色 擷取蛋白質體學相關的經典文獻
Objective	English	<ol style="list-style-type: none"> To provide students easily apply the knowledge learned from the class to further self-reading, research, and other purpose. To realize the basic relationships among genomics, proteomics, and bioinformatics. To understand the impacts of global functional protein on cancer and immunological diseases. To catch newly updated proteomics tools and understand classic academic achievements.
先修科目	中文	普通化學，生物化學
Pre Course	English	General Chemistry, biochemistry
教材內容	中文	<ol style="list-style-type: none"> 蛋白質體學綜論 基因質體與蛋白質體 蛋白質純化策略 蛋白質質譜儀技術 生物資訊學概論 系統生物學概論 基礎和生物醫學上之應用 蛋白質間相互作用和後轉譯調控機制 跨領域研究的重要性

Outline	English	<ol style="list-style-type: none"> 1. Overview of proteomics 2. Genome and proteome 3. Protein purification strategies 4. Mass spectrometry 5. Introduction to bioinformatics 6. How systems biology works 7. Basic and biomedical applications 8. Protein-protein interaction network and PTMomics 9. Cross-disciplinary research in academic studies
教學方式 Teaching Method	中文 English	<p>中文 講義授課、討論</p> <p>English Lecture, discussion</p>
參考書目	中文	<p>Proteomics in Practice: A Laboratory Manual of Proteome Analysis. By Reiner Westermeier, Tom Naven. John Wiley & Sons (Sd), 2002</p> <p>Discovering Genomics, Proteomics, and Bioinformatics. By: A. Malcolm Campbell, Laurie J. Heyer Addison Wesley, 2002</p>
Reference	English	<p>Proteomics in Practice: A Laboratory Manual of Proteome Analysis. By Reiner Westermeier, Tom Naven. John Wiley & Sons (Sd), 2002</p> <p>Discovering Genomics, Proteomics, and Bioinformatics. By: A. Malcolm Campbell, Laurie J. Heyer Addison Wesley, 2002</p>
教學進度	中文	<ol style="list-style-type: none"> 1. 蛋白質體學綜論 2. 基因質體與蛋白質體 3. 蛋白質純化策略 4. 蛋白質質譜儀技術 5. 生物資訊學概論 6. 系統生物學概論 7. 基礎和生物醫學上之應用 8. 蛋白質間相互作用和後轉譯調控機制 9. 跨領域研究的重要性
Syllabus	English	<ol style="list-style-type: none"> 1. Overview of proteomics 2. Genome and proteome 3. Protein purification strategies 4. Mass spectrometry 5. Introduction to bioinformatics 6. How systems biology works 7. Basic and biomedical applications 8. Protein-protein interaction network and PTMomics 9. Cross-disciplinary research in academic studies
評量方式 Evaluation	中文 English	<p>中文 期中考（40%）、期末考（40%）、隨堂考（20%）</p> <p>English One mid-term and one final examination will be given to test on the basic concepts of the course. Grades will be determined from quiz and participation (20%), mid-exam (40%) and final exam (40%).</p>
參考網址		