

朝陽科技大學 091學年度第2學期教學大綱
Special Topics of Biochemical Engineering 生化工程特論

當期課號	7213	Course Number	7213
授課教師	劉炳嵐	Instructor	LIU,BING LAN
中文課名	生化工程特論	Course Name	Special Topics of Biochemical Engineering
開課單位	應用化學系碩士班一A	Department	
修習別	選修	Required/Elective	Elective
學分數	3	Credits	3
課程目標	<p>本課程主要探討細胞生理活性物質(例如細胞、酵素或抗體等)的生產製程與其最適化。欲瞭解生化工程之大要需對細胞的生理活性物質特性與基本的化學工程運作原理有深刻的認識。由於受限於上課時數，故本課程雖無法涵蓋與生化工程相關的每一章節，但對於細胞、酵素與微生物代謝作用以及代謝物之生產將在課程中與予討論。簡言之，本課程主要的目的是為本系同學開啓一條不同於有機或分析化學之另一專長，但過程中是處處充滿學習、挑戰之路。</p>	Objectives	<p>Processing of biological materials such as cells, enzymes or antibodies are the central domains of "Biochemical Engineering". Success in biochemical engineering requires integrated knowledge of governing biological properties and basic principles of biochemical engineering methodology and strategy. In this course, we are unable to cover all the aspects of this field due to time limitation. However, the topics on cells, metabolism, enzymes, microbial metabolites and the pocessing will be discussed to our utmost. In short, the objectives of this course is mainly intended to start on this challenging and exciting path, where the students might be with less familiarity.</p>
教材	主題課程講授為主，相關輔助教材為輔，並進行相關知識新發表學術期刊之選讀報告。	Teaching Materials	Taught course, supplement with relative articles.
成績評量方式	<ol style="list-style-type: none"> 1. 期中考 40% 2. 口頭報告 30% 3. 平時成績 20% 4. 出席狀況 	Grading	<ol style="list-style-type: none"> 1. middle test 40% 2. oral 30% 3. lecture performance 20% 4. attendance 10%
教師網頁	-		
教學內容	<p>本課程將以探討生物基礎常識、微生物生長模式、動力學相關課題，同時涵蓋反應器之設計及其輸送現象。最後；將探討生物技術上常見之生物分離程序方法與其應用。</p>	Syllabus	<p>The lecture topics covered biological basis, growth kinetics, biorecator design as well as bioseparation technologies.</p>

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