# 朝陽科技大學 093學年度第1學期教學大綱
# Introduction of Biotechnology 生物技術概論

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| 當期課號 | 1586 | Course Number | 1586 |
| 授課教師 | 劉炳嵐 | Instructor | LIU,BING LAN |
| 中文課名 | 生物技術概論 | Course Name | Introduction of Biotechnology |
| 開課單位 | 應用化學系(四日)三A | Department | |
| 修習別 | 選修 | Required/Elective | Elective |
| 學分數 | 3 | Credits | 3 |
| 課程目標 | Biotechnology一詞之一般譯名是生物技術，它又稱生物工學。繼資訊科技之後，爲人類健康圓夢的生物科技已蔚爲新世紀的主導型高科技。 隨著政府允諾每年百億新資金的大跨步投入和科技發展計畫的開放民間參與，未來幾年上千的生物科技工作機會已隱然成形。 整體來說，生物技術的基礎學科範圍極廣，涵蓋生物、化學與工程三大領域之綜合，互通有無；生物技術的應用方面所包括部份很廣，舉凡基於某些特定用途的前提下，以生物體整體或其部份進行合成、轉換等生化反應用以製造或改良產品，以開發或增進微生物、植物、動物的生產力，皆可曰生物技術。 | Objectives | After information technology, biotechnology (also called bio-engineering) is widely recognized as one of the most-promising hi-technology as it can largely improve the quality of our life. In general, this technology covers many fields of science in laboratory such as chemistry, microbiology, biochemistry, and genetics. For potential applications in industry, it is also strongly related to bio-chemical engineeging. Above of all, the knowledge of biology can be viewed as the basic part for its development and applications in future. In short, biotechnology is defined to use the whole or parts of the cells thereof to produce chemicals and/or to supply services so as to improve the quality of human life. |
| 教材 | 張玉瓏,徐乃芝,許素菁 (2004) 生物技術（第二版）(文京出版機構) | Teaching Materials | |
| 成績評量方式 | 1. 期中考 30% 2. 期末考 40% 3. 作業成績 20% 4. 出席狀況 10% | Grading | 1. middle test 30% 2. final exam 40% 3. homework 20% 4. attendance 10% |
| 教師網頁 | | | |
| 教學內容 | DNA基本技術、RNA與轉錄相關技術、蛋白質及免疫技術、基因選殖、限制?及其他核酸酵素、聚合?鏈反應、基因轉殖及基因剔除技術、基因改良食品及植物基因轉殖、基因轉殖動物的應用、複製動物、幹細胞、生物晶片、基因體計劃、人類基因體計劃及後基因體學 | Syllabus | DNA technology, RNA and transcription technology, protein and immunological technology, Gene cloning, Restriction enzymes, PCR, Gene transfer and knock-out, GMO, Animal replication, Stem cell, Biochip, Human gemon project, Post-genomics. |

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