②国立束牵大學

課 綱 Course Outline

生化暨分子醫學科學系碩士班國際組

中文課程名稱 Course Name in Chinese		分子生物科技					
英文課程名稱 Course Name in English		Molecular Biotechnology					
科目代碼 Course Code		BMM_M0050	班 別 Degree	Ma	碩士班 Master's		
修別 Type		必修 Required	學分數 Credit(s)	3. 0	時數 Hour(s)	3.0	
先修課程 Prerequisite			·				
課程目標 Course Objectives							
The course aims to guide students to understand cell biology, molecular cell biology, knowledge, scientific rationale, and methodology; in addition, students can learn the ability to gain comprehensive understanding of scientific issues related to cell biology.							
系教育目標 Dept.'s Education Objectives							
1	培養從事生命科學及生物技術之專業人才。 Cultivating professionals engaged in biochemistry and molecular medicine.						
2	培育學生具有自我學習、獨立思考與創新之能力。 Fostering students to acquire the capabilities of self-learning, independent thinking, and innovation.						
糸専業能力 Basic Learning Outcomes					課程目標 力相關性 Correlat between Objectiv Dept.'s Objectiv	課程目標與系專業能 力相關性 Correlation between Course Objectives and Dept.'s Education Objectives	
A	具備生物技術相關學科之基礎知識。 Having a fundamental understanding of subjects related to biotechnological techniques.					•	
В	具備邏輯分析與解 Having the capab solving.	具備邏輯分析與解決問題的能力。 Having the capabilities of logical analysis and problem O solving.				0	
C	具備資料整合、數據分析與書面及口頭報告能力。 Having the capabilities of data integration and analysis, and O the skills of written and poster presentation.					\bigcirc	

D	具備終生學習的能力。					
ע	Having the capability of lifelong learning.					
E	溝通協調能力與團隊合作之精神,及生物醫學工作人員專業倫理。					
	The spirit of communication, coordination, and teamwork, as					
	well as professional ethics for biomedical workers.					
圖示說明Illustration :● 高度相關 Highly correlated ○中度相關 Moderately correlated						
課程大綱						
Course Outline						
1. Manipulation of gene expression						
2. Protein sorting and degradation						
3. R	3. Recombinant biotechnology					
4. G	4. Genomics to proteomics					
5. Cell-based biotechnology						
6. F	luorescence and luminescence					
7.M	lolecular imaging					
8. Nanobiotechnology						
資源需求評估(師資專長之聘任、儀器設備的配合・・・等)						
	Resources Required (e.g. qualifications and expertise, instrument and equipment, etc.)					
Computer-aided projector						
課程要求和教學方式之建議						
Course Requirements and Suggested Teaching Methods						
1. Lecture and Discussion						
2.	2. Homework assignments					
3.	3. Oral report-part of assignments					
4.	4. Field trip					
其他						
Miscellaneous						
1.	1. Molecular Biotechnology- Principles and applications of rDNA by B.R. Glick and J.					
J.	J. Pasternak					
2.	2. Molecular Biology of the Genes by Watson et. al.					