



教學計劃表 Syllabus

課程名稱(中文) Course Name in Chinese	分子生物科技		學年/學期 Academic Year/Semester	113/1	
課程名稱(英文) Course Name in English	Molecular Biotechnology				
科目代碼 Course Code	BMM_M0050	系級 Department & Year	碩士	開課單位 Course-Offering Department	生化暨分子醫學科學系
修別 Type	必修 Required	學分數/時間 Credit(s)/Hour(s)	3.0/3.0		
授課教師 Instructor	/彭致文/李佳洪				
先修課程 Prerequisite					
課程描述 Course Description					
本課程主要讓學生對於生物科技涵蓋的內容有基礎的認識，課程的重點之一為啟發學生對於生物科技之興趣及思考能力					
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.					
系專業能力 Basic Learning Outcomes					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.				●
B	具備邏輯分析與解決問題的能力。Having the capabilities of logical analysis and problem solving.				○
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 the skills of written and poster presentation.				○
D	具備終生學習的能力。Having the capability of lifelong learning.				●
圖示說明 Illustration : ● 高度相關 Highly correlated ○ 中度相關 Moderately correlated					
授課進度表 Teaching Schedule & Content					
週次 Week	內容 Subject/Topics				備註 Remarks
1	Nanosystem characterization tools in the life sciences				
2	Cellular drug delivery				
3	Nanomaterials for cancer diagnosis				
4	Nanotechnology for targeted cancer therapy				
5	Fluorescence and bioluminescence in vivo imaging system				
6	期中考試週 Midterm Exam				
7	Recombinant DNA				

8	Recombinant virus	
9	Recombinant protein	
10	Fluorescence and luminescence application	
11	Omics biotechnology	
12	Molecular imaging in drug R & D	
13	Gene Editing-Crispr/Cas9 system	
14	Translational medicinal research	
15	Bioinformatic and drug development	
16	Overview and discussion	
17	End-term presentation	
18	期末考試週 Final Exam	

教學策略 Teaching Strategies

- 課堂講授 Lecture
 分組討論 Group Discussion
 參觀實習 Field Trip
 其他 Miscellaneous:

教學創新自評 Teaching Self-Evaluation

創新教學(Innovative Teaching)

- 問題導向學習(PBL)
 團體合作學習(TBL)
 解決導向學習(SBL)
 翻轉教室 Flipped Classroom
 磨課師 Moocs

社會責任(Social Responsibility)

- 在地實踐 Community Practice
 產學合作 Industry-Academia Cooperation

跨域合作(Transdisciplinary Projects)

- 跨界教學 Transdisciplinary Teaching
 跨院系教學 Inter-collegiate Teaching

- 業師合授 Courses Co-taught with Industry Practitioners

其它 other:

學期成績計算及多元評量方式 Grading & Assessments

配分項目 Items	配分比例 Percentage	多元評量方式 Assessments							
		測驗 會考	實作 觀察	口頭 發表	專題 研究	創作 展演	卷宗 評量	證照 檢定	其他
平時成績 General Performance	20%		✓						
期中考成績 Midterm Exam	30%		✓	✓					
期末考成績 Final Exam	30%		✓	✓					
作業成績 Homework and/or Assignments	20%						✓		
其他 Miscellaneous (_____)									

評量方式補充說明

Grading & Assessments Supplemental instructions

教科書與參考書目 (書名、作者、書局、代理商、說明)

Textbook & Other References (Title, Author, Publisher, Agents, Remarks, etc.)

課程教材網址(含線上教學資訊, 教師個人網址請列位於本校內之網址)

Teaching Aids & Teacher's Website(Including online teaching information.
Personal website can be listed here.)

其他補充說明 (Supplemental instructions)