



## 教學計劃表 Syllabus

課程名稱(中文) Course Name in Chinese	分子生物學		學年/學期 Academic Year/Semester	112/2	
課程名稱(英文) Course Name in English	Molecular Biology				
科目代碼 Course Code	LF_31800	系級 Department & Year	學二	開課單位 Course-Offering Department	生命科學系
修別 Type	學程 Program	學分數/時間 Credit(s)/Hour(s)	4.0/4.0		
授課教師 Instructor	/林國知/張瑞宜/周志青/謝函芸				
先修課程 Prerequisite					
課程描述 Course Description					
1. 教導學生瞭解核酸之基本結構、核酸複製、基因表現及調控 2. 此課程由林國知、張瑞宜、謝函芸及周志青等四位老師授課					
課程目標 Course Objectives					
使學生了解遺傳物質 (DNA) 的結構、原理及於生命科學的意義。					
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	具備生命科學相關學科之基礎知識Having the basic knowledge of life science.			●	
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之能力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	Ch 1 The beginning of molecular biology Ch 2 The structure of DNA				
2	Ch 13 Recombinant DNA technology and genetically modified organisms				
3	Ch 13 Recombinant DNA technology and genetically modified organisms				
4	Ch 5 Genome organization and evolution				
5	3/14 林國知老師考試 Ch 3 The versatility of RNA				
6	Ch 3 The versatility of RNA Ch 6 DNA replication and telomere maintenance				

7	Ch 6 DNA replication and telomere maintenance	
8	4/3 民族掃墓節放假 Ch 7 DNA repair pathways	
9	Ch 7 DNA repair pathways 4/18 張瑞宜老師考試	
10	Ch 14 Tools for analyzing gene organization, expression, and function	
11	Ch 8 Transcription in bacteria	
12	Ch 8 Transcription in bacteria Ch 9 Transcription in eukaryotes	
13	Ch 9 Transcription in eukaryotes 5/16 謝函芸老師考試	
14	Ch 11 RNA processing and post-transcriptional gene regulation	
15	Ch 11 RNA processing and post-transcriptional gene regulation Ch 4 Protein structure and folding	
16	端午節放假 Ch 12 The mechanism of translation	
17	Ch 12 The mechanism of translation	
18	6/17周志青老師考試	

### 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:

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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									
期中考成績 Midterm Exam									
期末考成績 Final Exam									
作業成績 Homework and/or Assignments									
其他 Miscellaneous (_____)									

評量方式補充說明

Grading & Assessments Supplemental instructions

以四次考試成績平均為原則

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.)

Fundamental Molecular Biology (3 ed, 2021) by Lizabeth Allison. 偉明圖書公司代理

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)