



教學計劃表 Syllabus

課程名稱(中文) Course Name in Chinese	細胞生物學AA		學年/學期 Academic Year/Semester	112/1	
課程名稱(英文) Course Name in English	Cell Biology				
科目代碼 Course Code	LF__2090AA	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/袁大鈞				
先修課程 Prerequisite					
課程描述 Course Description					
教導學生瞭解細胞之基本結構及其進行生命現象的分子機制。 Based on the records of student performance, the last 20% (or above) of the students might be failed.					
課程目標 Course Objectives					
了解細胞生物學之基本概念。					
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: A preview of Cell Biology Ch 2: The chemistry of the cell			林國知	
2	Ch 3: The macromolecules of the cell			林國知	
3	Ch 7: Membrane structure			林國知	
4	Ch 4 Cells and organelles Ch 12: The endomembrane system			林國知	
5	10/9 國慶日停課一天 10/11 林國知老師第一次考試			林國知	
6	Ch 12: The endomembrane system Ch 10 & 11: Chemiosmotic coupling model of ATP synthesis			林國知	

7	Ch 16, 19, 20: Protein targeting and sorting (Ch 16.4, 19.5, 20.4)	林國知
8	Ch 8: Transport across membrane	林國知
9	11/6 林國知老師第二次考試 11/8 袁大鈞老師開始上課 Ch 13: Cytoskeletal systems	林國知 袁大鈞
10	Ch 13: Cytoskeletal systems (11/15 全校運動會停課一次)	袁大鈞
11	Ch 14: Cellular movement:: motility and contractility	袁大鈞
12	Ch 15: Beyond the cell : Extracellular structures	袁大鈞
13	12/4 袁大鈞老師第一次考試 Ch 22: Signal transduction mechanisms: I. Electrical and synaptic signaling in neurons	袁大鈞
14	Ch 23: Signal transduction mechanisms: II. Messengers and receptors	袁大鈞
15	Ch 23: Signal transduction mechanisms: II. Messengers and receptors	袁大鈞
16	Ch 24: The cell cycle and mitosis	袁大鈞
17	1/1 元旦放假一天 Ch 24: The cell cycle and mitosis	袁大鈞
18	1/8 袁大鈞老師第二次考試	袁大鈞

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	0%								
期中考成績 Midterm Exam	50%	✓							林國知 50%
期末考成績 Final Exam	50%	✓							袁大鈞 50%
作業成績 Homework and/or Assignments	0%								
其他 Miscellaneous (_____)	0%								

評量方式補充說明

Grading & Assessments Supplemental instructions

教師考試成績總和；林國知50%，袁大鈞50%

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.)

Textbook :

1. Becker's World of the Cell (10/E, 2022) by Hardin et al.

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)