



教學計劃表 Syllabus

課程名稱(中文) Course Name in Chinese	細胞生物學AB		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__2090AB	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					
To teach students to understand the basic structure of cells and the molecular mechanism of life phenomena. 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			Kuo-Chih Lin	
2	Ch 3: The macromolecules of the cell			Kuo-Chih Lin	
3	Ch 7: Membrane structure			Kuo-Chih Lin	
4	Ch 4 Cells and organelles Ch 12: The endomembrane system			Kuo-Chih Lin	
5	10/9 National day (holiday) 10/12 Instructor KC Lin's first exam			Kuo-Chih Lin	
6	Ch 12: The endomembrane system Ch 10 & 11: Chemiosmotic coupling model of ATP synthesis			Kuo-Chih Lin	

7	Ch 16, 19, 20: Protein targeting and sorting (Ch 16.4, 19.5, 20.4)	Kuo-Chih Lin
8	Ch 8: Transport across membrane	Kuo-Chih Lin
9	11/6 Instructor KC Lin' s second exam 11/9 Instructor Ta-ChunYuan' s turn to start the lecture Ch 13: Cytoskeletal systems	Kuo-Chih Lin Ta-Chun Yuan
10	Ch 13: Cytoskeletal systems	Ta-Chun Yuan
11	Ch 14: Cellular movement:: motility and contractility	Ta-Chun Yuan
12	Ch 15: Beyond the cell : Extracellular structures	Ta-Chun Yuan
13	12/4 Instructor Ta-ChunYuan' s first exam Ch 22: Signal transduction mechanisms: I. Electrical and synaptic signaling in neurons	Ta-Chun Yuan
14	Ch 23: Signal transduction mechanisms: II. Messengers and receptors	Ta-Chun Yuan
15	Ch 23: Signal transduction mechanisms: II. Messengers and receptors	Ta-Chun Yuan
16	Ch 24: The cell cycle and mitosis	Ta-Chun Yuan
17	1/1 New year (holiday) Ch 24: The cell cycle and mitosis	Ta-Chun Yuan
18	1/8 Instructor Ta-ChunYuan' s second exam	Ta-Chun Yuan

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

The final test score is based on the average of the scores of four exams.

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)