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國立東華大學

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	113/1
課程名稱(英文) Course Name in English	Cell Biology				
科目代碼 Course Code	BMM_2090AA	系級 Department & Year	學二	開課單位 Course-Offering Department	生化暨分子醫學科學系
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: Membranes: Their structure, function, and chemistry	林國知
4	Ch 12: The endomembrane system	林國知
5	Ch 12: The endomembrane system 10/9 林國知老師第一次考試	林國知
6	Ch 10 & 11: Chemiosmotic coupling model of ATP synthesis Ch 16, 19, 20: Protein targeting and sorting (Ch 16.4, 19.5, 20.4)	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 10/30 林國知老師第二次考試	林國知
9	11/4 袁大鈞老師開始上課 Ch 13: Cytoskeletal systems	袁大鈞
10	Ch 13: Cytoskeletal systems (11/13 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	12/2 袁大鈞老師第一次考試 Ch 23: Signal transduction mechanisms: II. Messengers and receptors	袁大鈞
14	Ch 23: Signal transduction mechanisms: II. Messengers and receptors	袁大鈞
15	Ch 24: The cell cycle and mitosis	袁大鈞
16	Ch 24: The cell cycle and mitosis	袁大鈞
17	12/30 袁大鈞老師第二次考試	袁大鈞
18		袁大鈞

教 學 策 略 Teaching Strategies

- [x] 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 Industy-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(含出缺席) General Performance (Attendance Record)	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)