



## 教學計劃表 Syllabus

|  |   |                             |                                 |   |
|--|---|-----------------------------|---------------------------------|---|
| 課程名稱(中文)<br>Course Name in Chinese   | 脂質化學與代謝   |                             | 學年/學期<br>Academic Year/Semester | 112/2   |
| 課程名稱(英文)<br>Course Name in English   | Lipid chemistry and metabolism  |                             |                                 |   |
| 科目代碼<br>Course Code  | BT_M0140  | 系級<br>Department & Year     | 碩士                              | 開課單位<br>Course-Offering Department  |
| 修別<br>Type   | 選修 Elective   | 學分數/時間<br>Credit(s)/Hour(s) | 3.0/3.0                         |   |
| 授課教師<br>Instructor   | /蘇玟?  |                             |                                 |   |
| 先修課程<br>Prerequisite   |   |                             |                                 |   |
| 課程描述 Course Description  |   |                             |                                 |   |
| This course offers an in-depth exploration of lipid metabolism, encompassing its biochemical, physiological, and molecular dimensions. The primary focus will be on the key biochemical molecules and metabolic pathways essential for maintaining lipid homeostasis, with particular emphasis on phospholipids, triacylglycerols, and cholesterol. Additionally, the course will investigate current issues and research linking lipid metabolism to various human diseases, providing a comprehensive understanding of the subject's relevance in a clinical and health context. |   |                             |                                 |   |
| 課程目標 Course Objectives   |   |                             |                                 |   |
| Enable students to understand:   |   |                             |                                 |   |
| 1. Biochemical properties and metabolic pathways of lipids.  |   |                             |                                 |   |
| 2. The regulatory mechanisms of lipids metabolism and the associated signaling pathways.   |   |                             |                                 |   |
| 3. Techniques utilized in lipid biochemistry research.   |   |                             |                                 |   |
| 教導學生了解：  |   |                             |                                 |   |
| 1. 脂質的基本組成結構以及其生化物理特性。   |   |                             |                                 |   |
| 2. 脂質代謝路徑與其相關之調控機制與相關疾病。   |   |                             |                                 |   |
| 3. 脂質生化學研究相關技術   |   |                             |                                 |   |
| 系專業能力<br>Basic Learning Outcomes   |   |                             |                                 | 課程目標與系專業能力相關性<br>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<br>Having the basic knowledge of biotechnology.   |                             |                                 | ●   |
| B  | 具備邏輯分析與解決問題的能力<br>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<br>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<br>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  |   |                             |                                 |   |
| 2  |   |                             |                                 |   |

|    |                    |  |
|----|--------------------|--|
| 3  |                    |  |
| 4  |                    |  |
| 5  |                    |  |
| 6  |                    |  |
| 7  |                    |  |
| 8  |                    |  |
| 9  | 期中考試週 Midterm Exam |  |
| 10 |                    |  |
| 11 |                    |  |
| 12 |                    |  |
| 13 |                    |  |
| 14 |                    |  |
| 15 |                    |  |
| 16 |                    |  |
| 17 |                    |  |
| 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:

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學期成績計算及多元評量方式 Grading & Assessments

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

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)