



教學計劃表 Syllabus

課程名稱(中文) Course Name in Chinese	有機化學(二)		學年/學期 Academic Year/Semester	114/2
課程名稱(英文) Course Name in English	Organic Chemistry(II)			
科目代碼 Course Code	CHEM21500	系級 Department & Year	學二	開課單位 Course-Offering Department
修別 Type	學程 Program	學分數/時間 Credit(s)/Hour(s)	2.0/2.0	
授課教師 Instructor	/賴彥勳			
先修課程 Prerequisite				
課程描述 Course Description				
<p>本課程旨在建立學生對有機化學之基本理論與反應概念。內容首先介紹化學鍵結原理與有機分子結構，進而探討直鏈碳氫化合物的結構特性及其代表性化學反應。課程將系統性講解常見官能基，包括醇類、有機酸、酯類與有機胺之形成、性質與反應行為，並說明官能基轉換與立體化學之基本概念。另介紹異戊二烯規則及其衍生之天然物與類固醇結構，延伸至胺基酸與生物有機化學之基礎。</p>				
課程目標 Course Objectives				
<p>透過有系統的介紹，各有機分子的形成及各基的特性及其化學反應，讓學生能充分了解有機化學與日常生活及健康的密切關係。</p>				
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	Intorduction			
2	Chapter 8 Addition reaction of alkene			
3	Chapter 8 Addition reaction of alkene			
4	Chapter 9 Alkynes			
5	Chapter 10 Radical reactions			
6	Chapter 12 Alcohol and phenol			
7	Spring break			

8	Chapter 13 Ether and Epoxides	
9	期中考試週 Midterm Exam	
10	Chapter 17 Aromatic compounds	
11	Chapter 18 Aromatic substitution reactions	
12	Chapter 19 Aldehyde and ketones	
13	Chapter 20 Carboxylic and their derivatives	
14	Chapter 21 Alpha carbon chemistry: enol and enolates	
15	Chapter 22 Amines	
16	Chapter 25 Biomolecule: amino acid, peptide, carbohydrate	
17	期末考試週 Final Exam	
18	Self-Directed Learning	

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(含出缺席) General Performance (Attendance Record)	20%								
期中考成績 Midterm Exam	40%								
期末考成績 Final Exam	40%								
作業成績 Homework and/or Assignments									
其他 Miscellaneous (_____)									

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.)

Organic chemistry, 3rd ed., David Klein, Wiley, 2017, ISBN 978-1-119-31615-2

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)