



## 教學計劃表 Syllabus

課程名稱(中文) Course Name in Chinese	有機化學(三)			學年/學期 Academic Year/Semester	112/2
課程名稱(英文) Course Name in English	Organic Chemistry(III)				
科目代碼 Course Code	CHEM31500	系級 Department & Year	學三	開課單位 Course-Offering Department	化學系
修別 Type	學程 Program	學分數/時間 Credit(s)/Hour(s)		2.0/2.0	
授課教師 Instructor	/林哲仁				
先修課程 Prerequisite					

### 課程描述 Course Description

有機化學是探討有機分子的結構與其性質關係的學問，藉由對有機小分子行為的了解，進而推展至複雜分子的合成與設計，是本課程的主要目的。

課程目標：

熟悉基礎有機化學結構、化學反應、有機光譜學

1. 學習基礎有機化學原理、化學反應與生物有機分子，結構與活性的關係。

2. 了解有機化合物的性質、活性與應用。

3. 建立對於有機化合物的性質與特性的認識，藉由演講說明與習作練習達成此目標。

### 課程目標 Course Objectives

透過逆合成分析的探討，讓學生了解以什麼樣的起始，經由那些方法可以最有效及最經濟的方式得到目標產物

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	具備化學基礎知識	●
B	具備獨立思考及分析解決問題之能	●
C	具備化學專業知	●
D	具備執行化學實驗之能力	○
E	具備國際視野與外語能力	○

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 16 Aldehydes and Ketones I. Nucleophilic Addition to the Carbonyl Group	
2	Ch 16 Aldehydes and Ketones I. Nucleophilic Addition to the Carbonyl Group	
3	Ch 17 Carboxylic Acids and Their Derivatives: Nucleophilic Addition-Elimination at the Acyl Carbon	

4	Ch 17 Carboxylic Acids and Their Derivatives: Nucleophilic Addition-Elimination at the Acyl Carbon	
5	Ch 17 Carboxylic Acids and Their Derivatives: Nucleophilic Addition-Elimination at the Acyl Carbon	
6	Ch 18 Reactions at the alpha Carbon of the Carbonyl Compounds: Enols and Enolates	
7	Ch 18 Reactions at the alpha Carbon of the Carbonyl Compounds: Enols and Enolates	
8	期中考- Midterm Exam	
9	Ch 18 Reactions at the alpha Carbon of the Carbonyl Compounds: Enols and Enolates	
10	Ch 19 Condensation and Conjugate Addition Reactions of Carbonyl Compounds: More Chemistry of Enolates	
11	Ch 19 Condensation and Conjugate Addition Reactions of Carbonyl Compounds: More Chemistry of Enolates	
12	Ch 19 Condensation and Conjugate Addition Reactions of Carbonyl Compounds: More Chemistry of Enolates	
13	Ch 19 Condensation and Conjugate Addition Reactions of Carbonyl Compounds: More Chemistry of Enolates	
14	Ch 20 Amines	
15	Ch 20 Amines	
16	Ch 20 Amines	
17	期末考試週 Final Exam	
18		

#### 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 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)	5%	✓							
期中考成績 Midterm Exam	45%	✓							
期末考成績 Final Exam	45%	✓							
作業成績 Homework and/or Assignments	10%	✓							
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.)									
1. Organic Chemistry, Solomons 2. The Art of Writing Reasonable Organic Reaction Mechanisms, Grossman 3. Organic Chemistry, Carey									
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)									