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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	有機化學(三)			學年/學期 Academic Year/Semester	113/2
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	Aldehydes and Ketones I. Nucleophilic Addition to the Carbonyl Group	
2	Aldehydes and Ketones I. Nucleophilic Addition to the Carbonyl Group	
3	Carboxylic Acids and Their Derivatives: Nucleophilic Addition-Elimination at the Acyl Carbon	

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

教 學 策 略 Teaching Strategies

- [x] 課堂講授 Lecture
- [x] 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)	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)