朝陽科技大學 097學年度第2學期教學大綱
Advanced Chemistry Exercise (II) 進階化學演習(二)

當期課號	1749	Course Number	1749
授課教師	卓重光	Instructor	JOW,CHUNG KUANG
中文課名	進階化學演習(二)	Course Name	Advanced Chemistry Exercise (II)
開課單位	應用化學系(四日)二A	Department	
修習別	選修	Required/Elective	Elective
學分數	1	Credits	1
課程目標	進階化學教學目標爲透過密集之習題演練與講解，提升學生在「有機化學」與「物理化學」相關課程之學習成效奠定基礎學科之基礎。	Objectives	The main purpose of this course is to support the teaching of basic chemistry courses: “organic chemistry 2” and “physical chemistry 1” through intensive training in problem solving.
教材	International Student Edition of Organic Chemistry, 6th Ed.by John McMurry	Teaching Materials	International Student Edition of Organic Chemistry, 6th Ed.by John McMurry
成績評量方式	每週交作業, 兩次期中考, 一次期末考.	Grading	homework every week two midterm. final exam.
教師網頁	http://www.cyut.edu.tw/~ckjow		
教學內容	本課程將針對有機化學的課本習題, 提供一系列的練習及解答,使學生除囉一般在課堂中學習的知識之外,還能對其衍生的題目有所了解及解答・ 1. 分子結構與化學鍵 2. 極性共價鍵;酸與鹼 3. 烷類和環烷類有機物 4. 烷和環烷之立體化學 5. 有機反應綜述 6. 烯類化合物之結構和反應性 7. 烯類化合物之反應和合成 8. 簡介炔類之有機合成 9. 立體化學簡介 10. 有機鹵化物 11. 鹵化烷類之反應; 親核取代和移去反應 12. 苯環及芳香族之性質 13. 苯環的化學:親電子取代反應 14. 醇與酚 15. 醚類,環氧化物和硫醇類及硫化物 16. 醛與酮 17. 有機酸和腈 18. 有機酸及親核取代反應 19. 羰基的阿爾法取代反應 20. 羰基的縮合反應 21. 胺的有機反應	Syllabus	This course aims to the practice of the Organic Chemistry. In addition to the understandind the knowledge of the Organic Chemisty, this course also affords chances to students to have know deeper theory of the texbook. 1. Structure and Bonding 2. Polar Covalent Bonds: Acids and Bases 3. Organic compounds: Alkanes and Cycloalkanes 4. Stereochemistry of alkanes and cycloalkanes 5. Overview of organic reactions 6. alkenes: structure and reactivity 7. alkenes: reactions and synthesis 8. alkynes: an introduction to organic synthesis 9. stereochemistry 10. alkyl halides 11. reactions of alkyl halides: nucleophilic substitutions and eliminations 12. Benzene and aromaticity 13. Benzene chemistry: Electrophilic aromatic substitution 14. Alcohols and Phenols 15. Ethers and Epoxides; Thiols and Sulfides 16. Aldehydes and Ketones 17.Carboxylic acids and Nitriles 18. Carboxylic acid derivatives and their reactions 19. Carbonyl Alpha-substitution Reactions 20. Carbonyl condensation reactions 21. Amines and their reactions

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