



# 課 綱 Course Outline

## 生化暨分子醫學科學系學士班

|                                                                        |                                                                                                                                         |                  |                    |                                                                                          |     |
|------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|------------------|--------------------|------------------------------------------------------------------------------------------|-----|
| 中文課程名稱<br>Course Name in Chinese                                       | 有機化學(一)                                                                                                                                 |                  |                    |                                                                                          |     |
| 英文課程名稱<br>Course Name in English                                       | Organic Chemistry (I)                                                                                                                   |                  |                    |                                                                                          |     |
| 科目代碼<br>Course Code                                                    | CHEM21400                                                                                                                               | 班 別<br>Degree    | 學士班<br>Bachelor' s |                                                                                          |     |
| 修別<br>Type                                                             | 學程<br>Program                                                                                                                           | 學分數<br>Credit(s) | 2.0                | 時 數<br>Hour(s)                                                                           | 2.0 |
| 先修課程<br>Prerequisite                                                   | 普通化學(一)(                                                                                                                                |                  |                    |                                                                                          |     |
| 課程目標<br>Course Objectives                                              |                                                                                                                                         |                  |                    |                                                                                          |     |
| 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。               |                                                                                                                                         |                  |                    |                                                                                          |     |
| 系教育目標<br>Dept.' s Education Objectives                                 |                                                                                                                                         |                  |                    |                                                                                          |     |
| 1                                                                      | 培養生化及生物醫學相關領域之人才。<br>Cultivating talents engaged in biochemistry and molecular medicine.                                                |                  |                    |                                                                                          |     |
| 2                                                                      | 培育學生具有自我學習、獨立思考與創新之能力。<br>Fostering students to acquire the capabilities of self-learning, independent thinking, and innovation.        |                  |                    |                                                                                          |     |
| 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                                                                      | 具備生命科學相關學科之基礎知識。<br>Having the basic knowledge of life science.                                                                         |                  |                    | ●                                                                                        |     |
| 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之能力。<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 |                                                                                                                                         |                  |                    |                                                                                          |     |
| 課程大綱                                                                   |                                                                                                                                         |                  |                    |                                                                                          |     |

## Course Outline

- 1、介紹化學鍵及有機分子結構
- 2、有關直鍵碳氫化合物之結構特性及相關之化學反應
- 3、講解醇類、有機酸、酯類及有機胺之形成及特性
- 4、官能基之轉換及相同的立體化學
- 5、介紹異戊二烯規則及所衍生的天然物、類固醇
- 6、胺基酸及生物有機化學
- 7、基本有機合成及逆合成分析

資源需求評估（師資專長之聘任、儀器設備的配合．．．等）

Resources Required (e.g. qualifications and expertise, instrument and equipment, etc.)

以具有所開課程專長之師資擔任授課。

課程要求和教學方式之建議

Course Requirements and Suggested Teaching Methods

以指定教材按原定進度教學，同時以適當的分子模型講解、立體化學及反應性的關係。

其他

Miscellaneous