

東海大學110學年度日間學士班理學院化學系化學組必修科目表  
Degree in Chemical Biology Required Courses List

|                                   | 科 目<br>Course   | 學分<br>Credits | 1st<br>year |   | 2nd<br>year |   | 3rd<br>year |   | 4th<br>year |   | Remarks   |
|-----------------------------------|---|---------------|-------------|---|-------------|---|-------------|---|-------------|---|---|
|                                   |   |               | F           | S | F           | S | F           | S | F           | S |   |
|                                   |   |               |             |   |             |   |             |   |             |   |   |
| 基礎課程<br>Basic course              | 11001-中文<br>Chinese   | 4             | 2           | 2 |             |   |             |   |             |   |   |
|                                   | 16058-大一英文<br>Freshman English                                | 6             | 3           | 3 |             |   |             |   |             |   |   |
|                                   | 16059-大二英文<br>Sophomore English                               | 4             |             |   | 2           | 2 |             |   |             |   |   |
|                                   | 01019-邏輯思維與運算領域<br>Logic Thinking & Basic Programming         | 2             | 2           |   |             |   |             |   |             |   |   |
|                                   | 01001-軍訓<br>Military only for Local students                  |               |             |   |             |   |             |   |             |   |   |
|                                   | 02001-大一體育<br>Freshman PE                                     |               |             |   |             |   |             |   |             |   |   |
|                                   | 02002-大二體育<br>Sophomore PE                                    |               |             |   |             |   |             |   |             |   |   |
|                                   | 00002-勞作教育<br>Laboreducation                                  |               |             |   |             |   |             |   |             |   |   |
| 通識必修科目<br>General of<br>Education | 99001-人文領域<br>Humanities                                      |               |             |   |             |   |             |   |             |   | 通識六領域必修人文、<br>自然及社會三領域各一門<br>課，至少修習12學分。<br>Among the 6 domains<br>of General Education,<br>one courses elected<br>from each of the 3<br>domains (Humanity,<br>Natural Science, Social<br>and Science ) is<br>required. At least 12<br>credits in total<br>should be taken. |
|                                   | 99007-社會領域<br>Social Sciences                                 |               |             |   |             |   |             |   |             |   |   |
|                                   | 99008-自然領域<br>Natural Sciences                                |               |             |   |             |   |             |   |             |   |   |
|                                   | 99009-文明與經典領域<br>Civilization & Classic                       |               |             |   |             |   |             |   |             |   |   |
|                                   | 99010-領導與倫理領域<br>Leadership & Ethics                          |               |             |   |             |   |             |   |             |   |   |
|                                   | 99013-議題導向領域<br>Interdisciplinary and<br>Multi-faceted Issues |               |             |   |             |   |             |   |             |   |   |
| 學系必修科目<br>Department              | 22000-普通化學<br>General Chemistry                               | 6             | 3           | 3 |             |   |             |   |             |   |   |
|                                   | 22001-普通化學實驗<br>General Chemistry Lab.                        | 2             | 1           | 1 |             |   |             |   |             |   |   |
|                                   | 21000-普通物理<br>General Physics                                 | 6             | 3           | 3 |             |   |             |   |             |   |   |
|                                   | 21001-普通物理實驗<br>General Physics Lab.                          | 2             | 1           | 1 |             |   |             |   |             |   |   |

|  |     |    |    |    |   |    |   |   |   |   |   |
|--|-----|----|----|----|---|----|---|---|---|---|---|
| 24383-微積分甲〈一〉<br>Calculus (I)              | 3   | 3  |    |    |   |    |   |   |   |   |   |
| 24385-微積分甲〈二〉<br>Calculus (II)             | 3   |    | 3  |    |   |    |   |   |   |   |   |
| 22101-基礎化學數學<br>Mathematics for Chemists   | 3   |    | 3  |    |   |    |   |   |   |   |   |
| 22046-有機化學<br>Organic Chemistry            | 6   |    |    | 3  | 3 |    |   |   |   |   |   |
| 22048-有機化學實驗<br>Organic Chemistry Lab      | 2   |    |    | 1  | 1 |    |   |   |   |   |   |
| 22050-分析化學<br>Analytical Chemistry         | 3   |    |    | 3  |   |    |   |   |   |   |   |
| 22051-分析化學實驗<br>Analytical Chemistry Lab.  | 1   |    |    | 1  |   |    |   |   |   |   |   |
| 22083-儀器分析<br>Instrumental Analysis        | 6   |    |    |    | 3 | 3  |   |   |   |   |   |
| 22022-物理化學實驗<br>Physical Chemistry Lab.    | 2   |    |    |    |   | 1  | 1 |   |   |   |   |
| 22123-無機化學<br>Inorganic Chemistry          | 6   |    |    |    |   | 3  | 3 |   |   |   |   |
| 22039-物理化學<br>Physical Chemistry           | 6   |    |    |    |   | 3  | 3 |   |   |   |   |
| 22035-儀器分析實驗<br>Instrumental Analysis Lab. | 1   |    |    |    |   |    | 1 |   |   |   |   |
| 22031-綜合討論<br>Seminar                      | 2   |    |    |    |   |    |   |   |   | 2 | 群修課 3 選 1<br>Required elective<br>One out of three is required. |
| 22667-專題研究(三)<br>Directed Research(III)    | 2   |    |    |    |   |    |   |   |   | 2 |   |
| 63112-校外實習<br>Internship                   | 2   |    |    |    |   |    |   |   |   | 2 |   |
| 必修學分數<br>Required Credits                  | 88  | 18 | 19 | 10 | 9 | 10 | 8 | 0 | 2 |   |   |
| 選修學分數<br>Electives Credits                 | 40  |    |    |    |   |    |   |   |   |   |   |
| 畢業學分數<br>Total Credits                     | 128 |    |    |    |   |    |   |   |   |   |   |

說明：

- 一、本科目表適用於本學年度入學新生，選修科目請參考學期開課資料。(109.11.17教務會議通過)  
前次修正時間為(100.04)(102.04)(105.11)(108.04)  
This course chart is suitable for freshmen enrolled in this academic year. For elective courses, please refer  
To the semester "[Search for All Open Course List](#)"
- 二、自100學年度起入學新生須符合本校英文能力畢業門檻實施辦法之規定。
- 三、自101學年度起入學新生須符合本校學生體育畢業門檻實施辦法之規定。