

## Secondary Schools - The Hong Kong University of Science and Technology (HKUST)

### Dual Program 2026

### 中學／大學雙修課程 2026

#### Course Syllabus 課程大綱

| Course Information 課程資料    | Level 1 (Chemistry) 階段一（化學）                                                                                                                                                         |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Course Instructors 課程導師    | Dr Frederick SHEONG (Department of Chemistry) 常富傑博士（化學系）<br>Dr TSE Wai Pui Veronica (Department of Chemistry) 謝惠佩博士（化學系）<br>Dr CHEUNG Man Sing (Department of Chemistry) 張文星博士（化學系） |
| Medium of Instruction 教學語言 | English 英語授課 and/or<br>Cantonese with lecture notes in English 廣東話，輔以英文教材                                                                                                           |
| Time 上課時間                  | 2:00 pm - 5:00 pm                                                                                                                                                                   |
| Venue 地點                   | HKUST Campus 香港科技大學                                                                                                                                                                 |

#### Course Objectives 課程目標

It is an introductory course for students with limited background in chemistry. It covers basic concepts and core topics for a solid foundation in chemistry. This course will adopt blended learning in order to maximize learning effectiveness. It aims to:

- Introduce basic chemical concepts and historical development of chemistry;
- Introduce essential principles and concepts in chemistry;
- Explain the connection of chemistry with modern technology;
- Explain the importance of chemistry in daily life.

這是一個讓有限化學背景的學生修讀的基礎課程，涵蓋化學的基本概念和知識基礎的核心課題。為提升學生的學習效益，此課程將採用混合教學模式。本課程旨在：

- 介紹基本的化學概念和化學的歷史發展；
- 介紹重要的化學原理和概念；
- 闡明化學與現代科技的關係；
- 解釋在日常生活中化學的重要性。

#### Assessment 評核方式

Classwork / Homework / Mid-term Test / Final Assessment (No make-up mid-term test and assessment will be arranged)

課堂表現／功課／中期測試／期終評估（不安排後補中期及期終評估）

### Attendance and Certificate Requirements 出席率與證書之要求

To receive a certificate, students must adhere to the following requirements:

要獲得證書，學生必須遵守以下要求：

- **Attendance:** Students are required to attend **at least 80%** of classes. No absences will be excused for any reason.  
**出席率：**學生必須出席**至少 80%** 的課堂。無論原因如何，缺席課堂均不予以豁免。
- **Certificate:** Upon completion of the course, students who achieve a grade of **C or above** and fulfil the attendance requirement will be awarded a certificate.  
**證書：**完成課程後，成績達到 **C 級或以上**，且符合出席率要求的學生將獲頒證書。

### Remarks 備註

1. Course schedule and content are subject to change if necessary.  
課程時間表及內容為暫定，會應需要而變更。
2. The medium of instruction adopted for this course will depend on the enrolment each year.  
課程最終採取的教學語言將依據每年報讀學生情況而定。
3. Outstanding students will be promoted to DP Level 2.  
表現優異的同學可晉升雙修課程階段二。

**DP Level 1 (Chemistry)— Course Schedule**  
**雙修課程 階段一（化學）— 課程時間表**

| Session<br>節次 | Date<br>日期       | Topic<br>課題                                                             |
|---------------|------------------|-------------------------------------------------------------------------|
| 1             | 28/11/2026 (Sat) | Introduction to Chemistry<br>化學緒論                                       |
| 2             | 5/12/2026 (Sat)  | Atoms and Atomic Structure<br>原子與原子結構                                   |
| 3             | 12/12/2026 (Sat) | Chemical Bonds<br>化學鍵                                                   |
| /             | 19/12/2026 (Sat) | No Class [Study Break]                                                  |
| /             | 26/12/2026 (Sat) | No Class [Christmas and New Year Holidays]                              |
| /             | 2/1/2027 (Sat)   | No Class [Christmas and New Year Holidays]                              |
| 4             | 9/1/2027 (Sat)   | Chemical Bonds<br>化學鍵                                                   |
| 5             | 16/1/2027 (Sat)  | The Mole Concept and Chemical Calculations<br>摩爾概念和化學計算                 |
| 6             | 23/1/2027 (Sat)  | States of Matter and Intermolecular Forces<br>物質的態和分子間的作用力              |
| 7             | 30/1/2027 (Sat)  | Acids and Bases<br>酸和鹼                                                  |
| /             | 6/2/2027 (Sat)   | No Class [Study Break - Lunar New Year]                                 |
| 8             | 13/2/2027 (Sat)  | Redox and Electrochemistry (+ <b>Midterm test</b> )<br>氧化還原和電化學 (+期中測驗) |
| 9             | 20/2/2027 (Sat)  | Redox and Electrochemistry<br>氧化還原和電化學                                  |
| 10            | 27/2/2027 (Sat)  | Organic Chemistry<br>有機化學                                               |
| 11            | 6/3/2027 (Sat)   | Organic Chemistry<br>有機化學                                               |
| 12            | 13/3/2027 (Sat)  | Polymers<br>高聚物                                                         |
| 13            | 20/3/2027 (Sat)  | Chemical Reactions and Energy<br>化學反應與能量                                |
| /             | 27/3/2027 (Sat)  | No Class [Study Break – Easter Holidays & Ching Ming Festival]          |
| /             | 3/4/2027 (Sat)   | No Class [Study Break – Easter Holidays & Ching Ming Festival]          |
| 14            | 10/4/2027 (Sat)  | Reaction Kinetics<br>反應動力學                                              |
| 15            | 17/4/2027 (Sat)  | Chemical Equilibrium<br>化學平衡                                            |

|    |                 |                                       |
|----|-----------------|---------------------------------------|
| 16 | 24/4/2027 (Sat) | Assessment<br>評核                      |
| /  | 1/5/2027 (Sat)  | No Class [Study Break – Labor Day]    |
| -  | 8/5/2027 (Sat)  | Make-up Session (if any)<br>後補課節 (如有) |