

**Course Syllabus 課程大綱**  
**Secondary Schools - The Hong Kong University of Science and Technology (HKUST)**  
**Dual Program 2022**  
**Level 1 (Life Science)**

**中學／大學雙修課程 2022**  
**階段一（生命科學）**

**Course Objectives 課程目標**

This course aims to provide students with a basic understanding of life systems and arouse their interest in life science. The course starts by introducing cells and the basic unit of life. We explore the features of life by learning the structures and functions of it. It will then focus on the key life processes in animals and plants, genetics, ecology and human diseases. In this course, demonstrations and various learning activities are designed to facilitate students to acquire critical thinking, scientific enquiry and communication skills. Besides, this course will adopt blended learning to maximize learning effectiveness.

本課程旨在為學生建立對生命系統的基本認知及引起學生對生命科學的興趣。生命始於細胞，以細胞為基本單位。通過認識細胞的結構和功能，學生便能探索生命；從而了解動植物的生命機制、基因、生態和人類的疾病。課程會透過示範及不同的學習活動，幫助學生提高批判性思考、科學探究和溝通技巧。此外，為提升學習效益，本課程將採用混合教學模式。

**Pre-requisite 修讀條件**

General understanding of the contents listed in the Science (Secondary 1-3) Syllabus [HK EDB:

[http://cd1.edb.hkedcity.net/cd/science/is/sci\\_syllabus\\_S1to3\\_e.pdf](http://cd1.edb.hkedcity.net/cd/science/is/sci_syllabus_S1to3_e.pdf)], and have a genuine interest in life and the living world.

對在初中課程綱要中列明的內容有大致的認識 [教育局：

[http://cd1.edb.hkedcity.net/cd/science/is/sci\\_syllabus\\_S1to3\\_e.pdf](http://cd1.edb.hkedcity.net/cd/science/is/sci_syllabus_S1to3_e.pdf)]，以及對生命和生物世界有濃厚的興趣。

**Course Instructors 課程導師**

Dr Benny LAI 賴國偉博士 (Session 1 – 4)

Dr Otis LAM 林耀文博士 (Session 5 – 8)

Dr Sarah CHOY 蔡笑華博士 (Session 9 – 12)

Dr Amy LI (Division of Life Science) 李嵐博士 (生命科學部) (Session 13 – 17)

**Medium of Instruction 教學語言**

English 英語授課

**Assessment 評核方式**

Group presentations / Classwork / Homework / Final

Assessment (No make-up assessment is arranged)

小組報告／課堂表現／功課／期終評估（不安排後補評估）

**Remarks 備註**

1. In view of the development of COVID-19, Pre-stage Level and Level 1 of Dual Program will adopt online teaching and learning mode.  
由於新冠肺炎疫情持續，雙修課程預備階段及階段一的課堂將採用網上教學模式。
2. Outstanding students will be promoted to DP Level 2. Course schedule and content are subject to change if necessary.  
表現優異的同學可晉升雙修課程階段二。課程時間表及內容為暫定，會應需要而變更。

DP Level 1 (Life Science) — Course Schedule  
雙修課程 階段一（生命科學） — 課程時間表

| Session<br>節次 | Date<br>日期       | Time<br>時間            | Topic<br>課題   |
|---------------|------------------|-----------------------|---|
| 1             | 19/11/2022 (Sat) | 2:00 – 5:00 pm        | Lecture: Introduction & Plant Biology<br>課堂: 課程簡介 及 植物學               |
| 2             | 26/11/2022 (Sat) |                       | Lecture: Photosynthesis<br>課堂: 光合作用                                   |
| 3             | 3/12/2022 (Sat)  |                       | Lecture: Ecology & Conservation Biology<br>課堂: 生態學 及 保育學              |
| 4             | 17/12/2022 (Sat) |                       | Tutorial 1<br>導修一   |
| 5             | 7/1/2023 (Sat)   |                       | Lecture: Biochemistry of Life<br>課堂: 生命與生物化學                          |
| 6             | 14/1/2023 (Sat)  |                       | Lecture: Cells and Cell Structures / Organelles<br>課堂: 細胞及細胞結構 / 細胞器  |
| 7             | 28/1/2023 (Sat)  |                       | Lecture: Material transport & Enzymatic Reactions<br>課堂: 細胞代謝過程 和 酶作用 |
| 8             | 4/2/2023 (Sat)   |                       | Tutorial 2<br>導修二   |
| 9             | 11/2/2023 (Sat)  |                       | Lecture: Respiration<br>課堂: 呼吸作用                                      |
| 10            | 18/2/2023 (Sat)  |                       | Lecture: Cell Cycle<br>課堂: 細胞週期                                       |
| 11            | 25/2/2023 (Sat)  |                       | Lecture: Embryonic Development and Aging<br>課堂: 發育和老化                 |
| 12            | 4/3/2023 (Sat)   |                       | Tutorial 3<br>導修三   |
| 13            | 11/3/2023 (Sat)  |                       | Lecture: Human Anatomy<br>課堂: 人體結構                                    |
| 14            | 18/3/2023 (Sat)  |                       | Lecture: Basic Human Disease<br>課堂: 人類疾病                              |
| 15            | 25/3/2023 (Sat)  |                       | Lecture: Bacteriophage & Cancer Therapy<br>課堂: 噬菌病毒 和 癌症治療            |
| 16            | 1/4/2023 (Sat)   |                       | Tutorial 4<br>導修四   |
| 17            | 15/4/2023 (Sat)  |                       | <b>Assessment</b><br>評核   |
|               | 22/4/2023 (Sat)  | To be confirmed<br>待定 | Make-up Session (if any)<br>後補課節 (如有)                                 |