

**The Chinese University of Hong Kong
Faculty of Science
Science Academy for Young Talent**

Summer Courses 2019
Course Outline

CUSA1103 Learning Biochemistry Through Games
透過遊戲學習生物化學

Introduction:

This course aims at facilitating S1-S3 students to learn some foundation biochemical principles through a series of group games. In this course, essential knowledge and concepts of biochemistry, such as 1) the Central Dogma: the synthesis of proteins in accordance with the genes stored in DNA, 2) fundamental principles and the importance of metabolic pathways to release of energy from food, and 3) basic practical skills of biochemistry by means of innovative technology are covered. Furthermore, this course emphasizes on the peer interaction and corporation in groups; where an enjoyable atmosphere will be fostered for our students to learn through the experiential learning of games.

本課程旨在透過一系列小組遊戲，讓中一至中三學生學習一些生物化學的基礎知識和理論，例如〔一〕從 DNA 到信使 RNA 以及蛋白質的分子程序等「中心法則」的概念；〔二〕從食物中釋放能量的生物化學等基本新陳代謝的知識；〔三〕利用虛擬科技體驗生物化學一些應用實驗。除此之外，本課程亦注重同學們之間的互動和合作，並希望他們能在遊戲中體驗學習，一起共渡快樂的時光。

Medium of Instruction:

Cantonese instruction supplemented with English teaching materials (Class A to F);
English only (Class G to H).

Organising Unit:

Biochemistry Programme, School of Life Sciences, Faculty of Science, CUHK

Teacher:

Dr. LO Fai Hang
School of Life Sciences, CUHK
Rm. 507B, Mong Man Wai Building, CUHK
Tel: 3943 5019, E-mail: lofaihang@cuhk.edu.hk

Demonstrators:

Students from Programme of Biochemistry, School of Life Sciences, CUHK

Course Content:

The three-hour workshop will cover the following topics:

- The Central Dogma: the molecular processes from DNA to mRNA and then proteins.
- Fundamental metabolism: the biochemical processes to release energy from food.
- Virtual reality experiments in Biochemistry

Duration	3 contact hours per session
Date & Time	CUSA1103A – 6 July 2019 (10:00 am – 1:00 pm) CUSA1103B – 6 July 2019 (2:00 pm – 5:00 pm) CUSA1103C – 13 July 2019 (10:00 am – 1:00 pm) CUSA1103D – 13 July 2019 (2:00 pm – 5:00 pm) CUSA1103E – 20 July 2019 (10:00 am – 1:00 pm) CUSA1103F – 20 July 2019 (2:00 pm – 5:00 pm) CUSA1103G – 27 July 2019 (10:00 am – 1:00 pm) (English only) CUSA1103H – 27 July 2019 (2:00 pm – 5:00 pm) (English only) 3 August 2019* (make-up class)
Venue	The Chinese University of Hong Kong
Enrollment	8 students per session
Expected applicants	Students who promoting to or studying S2-S3 who are interested in life sciences
Tuition Fee	HKD 700.00
Credit	0.25 Academy Unit Certificates of attendance will be awarded to students

* This date is reserved for make-up classes in case there is any cancellation of classes due to bad weather or other factors.