

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

Summer Courses 2021
Course Outline

CUSA1071 How Chemistry Works
化學的真相

Introduction:

This course is designed for students to learn about some fundamental chemical principles, and some general chemical knowledge related to our daily lives. This course allows students to understand how chemistry works in various daily life situations. Students will learn the basic principles of chemistry including atoms and molecules, structure and chemical bondings, molecular geometry and properties, spectroscopy, fluorescence and phosphorescence and the uses of modern methods to carry out chemical analysis, etc. This course includes lectures and hand-on experimental sessions.

本課程的設計旨在讓同學學到一些基礎化學原理，及一些與日常生活相關的基本化學知識。課程能夠讓同學們明白在一些生活場景中，化學怎樣發揮它的功用。同學會在課程中學到基礎化學原理如原子與分子、結構與化學鍵合、分子幾何及特性、光譜、熒光、磷光及利用現代方法進行化學分析等。課程以講課及實驗形式進行。

Medium of Instruction: Cantonese supplemented with English

Organising Unit: Department of Chemistry, Faculty of Science, CUHK

Teachers: Dr. Cheung Yu San
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Course Content:

<p>2 August 2021 (Monday)</p> <p>9:30 am – 12:30 pm 2:00 pm – 5:00 pm</p>	<p><u>Lecture and Activities:</u> Spectroscopy Fluorescence and phosphorescence</p> <p><u>Assessment:</u> Short-answer exercise</p>
<p>3 August 2021 (Tuesday)</p> <p>9:30 am – 12:30 pm 2:00 pm – 5:00 pm</p>	<p><u>Lecture:</u> Atoms and molecules, structure and chemical bondings (1)</p> <p><u>Assessment:</u> Short-answer exercise</p>
<p>4 August 2021 (Wednesday)</p> <p>9:30 am – 12:30 pm 2:00 pm – 5:00 pm</p>	<p><u>Lecture:</u> Atoms and molecules, structure and chemical bondings (2)</p> <p><u>Assessment:</u> Short-answer exercise</p> <p><u>Laboratory Activities:</u> Determination of the contents of dyes in mouthwash</p> <p><u>Assessment:</u> Experimental results</p>
<p>5 August 2021* (Thursday)</p> <p>9:30 am – 12:30 pm 2:00 pm – 5:00 pm</p>	<p>Make-up Class</p>

Duration	3 days sessions (total 18 contact hours)
Date	2 – 4 August 2021 5 August 2021* (make up class)
Time	9:30 am – 12:30 pm; 2:00 pm – 5:00 pm
Teaching Mode[#]	Face to Face (The Chinese University of Hong Kong)
Enrollment	24
Expected Applicants	Students who are studying S1-S3 (in the academic year 2020-2021)
Tuition Fee	HKD 3,380.00
Credit	1.25 Academy Unit Certificates or letters of completion will be awarded to students who attain at least 75% attendance.

* This date is reserved for make-up classes in case there is any cancellation of classes due to unexpected circumstances.

This course is offered face-to-face lessons at CUHK campus. It may switch to online teaching in accordance with the pandemic development and the policy of the university.