

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

Summer Courses 2024  
Course Outline

*CUSA1091 Artistic and Colourful Chemistry*  
色彩斑斕的化學世界

**Introduction:** This course combines the disciplines of science and culture and aims to provide students with fundamental understanding on the nature of science and their influences on our culture and daily life.

This course aims to provide students, who have a knowledge of the principles of chemistry, an overview on the mechanism of perceiving colors, the production of various classes of dyes and pigments, including their corresponding applications. Graphics, demonstrations, and project presentations are the major elements of interactive learning environment in this course.

本課程將結合科學與文化的內容，目的讓學生對基礎自然科學有更深入認識和了解，以至科學對日常生活和文化的影響。

本課程冀讓對化學有基拙理解的學生們明白顏色接收的基理，不同類型染料和顏料的製作以及其相應的應用。本課程會以不同的圖片，示範，小組專題研習及報告的形式以達至互動的學習環境和氣氛。

**Medium of Instruction:** Cantonese supplemented with English  
粵語輔以英語

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

**Teachers:**



**Dr. HAU, Chun Kit Sam (侯俊傑博士)**  
Lecturer  
Department of Chemistry, CUHK  
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**Course Content:**

<p>15 July 2024 (Monday)</p> <p>9:00 am – 12:00 nn 2:00 pm – 5:00 pm</p>	<p><b><u>Lecture:</u></b></p> <ul style="list-style-type: none"> <li>• A Brief Historical Introduction on Color</li> <li>• The Physical and Chemical Basis of Color</li> </ul> <p><b><u>Lab:</u></b></p> <ul style="list-style-type: none"> <li>• <i>Colour Composition in dyes and ink</i></li> </ul> <p><b><u>Assessment:</u></b></p> <ul style="list-style-type: none"> <li>• In Class Worksheet or Online Google Form</li> </ul>
<p>17 July 2024 (Wednesday)</p> <p>9:00 am – 12:00 nn 2:00 pm – 5:00 pm</p>	<p><b><u>Lecture:</u></b></p> <ul style="list-style-type: none"> <li>• Azo Dyes and Pigments</li> <li>• Carbonyl Dyes and Pigments</li> </ul> <p><b><u>Lab:</u></b></p> <ul style="list-style-type: none"> <li>• <i>Synthesis of Azo Dyes</i></li> </ul> <p><b><u>Assessment:</u></b></p> <ul style="list-style-type: none"> <li>• In Class Worksheet or Online Google Form</li> </ul>
<p>19 July 2024 (Friday)</p> <p>9:00 am – 12:00 nn 2:00 pm – 5:00 pm</p>	<p><b><u>Lecture:</u></b></p> <ul style="list-style-type: none"> <li>• Textile Dyes</li> <li>• Inorganic Pigments</li> <li>• Applications of Dyes and Pigments</li> </ul> <p><b><u>Lab:</u></b></p> <ul style="list-style-type: none"> <li>• <i>Dyeing Method with DIY Dyes</i></li> </ul> <p><b><u>Assessment:</u></b></p> <ul style="list-style-type: none"> <li>• In Class Worksheet or Online Google Form</li> </ul>
<p>22 July 2024* (Monday)</p> <p>9:00 am – 12:00 nn 2:00 pm – 5:00 pm</p>	<p>Make-up Class</p>

<b>Date</b>	15, 17, 19, 22* July 2024 (18 hours)				
<b>Time</b>	9:00 am – 12:00 pm & 2:00 pm – 5:00 pm				
<b>Teaching Mode</b>	Face to Face (The Chinese University of Hong Kong)				
<b>Enrollment</b>	30 – 40				
<b>Expected Applicants</b>	Students who are promoting or studying S3 – S6				
<b>Tuition Fee</b>	HKD 3,380.00				
<b>Credit</b>	1.25 Academy Unit(s) <i>Students can accumulate credits which will be regarded as "Other Learning Experience" when applying University.</i>				
<b>Grading Methods</b>	<b>Certificate</b>	<b>Assessment</b>	<b>Attendance</b>	<b>Credit(s)</b>	
	<b>Distinction</b>	<i>Certificate of Distinction</i>	<i>Excellent</i>	<i>&gt;75%</i>	<i>1.25</i>
	<b>Pass</b>	<i>Certificate of Merit</i>	<i>Pass</i>	<i>&gt;75%</i>	<i>1.25</i>
	<b>Attended</b>	<i>Certificate of Attendance</i>	<i>Fail</i>	<i>&gt;75%</i>	<i>0</i>
	<b>Fail</b>	<i>N/A</i>	<i>Fail</i>	<i>N/A</i>	<i>0</i>

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