

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

Summer Courses 2024
Course Outline

CUSA1043 Life Science in Daily Life
日常生活中的生命科學

Introduction: Life science is the study of all living organisms and life processes at all levels from ecological to molecular. While many people refer life science as biology, it is an enormous field of study that also covers genetics, molecular biology, cell biology, biochemistry, food science, biotechnology, ecology, and more. The knowledge of life science teaches us to respect and love the nature and all life forms. It also plays a substantial role in human welfare and helps to create many of our daily needs ranging from food to medicine.

生命科學以科學方式對所有生物體和生命過程由生態到分子各個層面進行研究。雖然許多人將生命科學稱為生物學，但其實它是一個巨大的研究領域，其中還包括遺傳學、分子生物學、細胞生物學、生物化學、食品科學、生物技術、生態學等。生命科學的知識教會我們尊重和熱愛自然和所有生命體。它還在人類福利方面發揮著重要作用，並有助於創造我們從食物到藥品的許多日常需求。

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

Organising Unit: School of Life Sciences, Faculty of Science, CUHK

Teachers:



Professor NGO Chi Ki Jacky (敖志祺教授)

Associate Professor

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Course Content:

<p>6 August 2024 (Tuesday)</p> <p>9:00 am – 12:30 pm 2:00 pm – 5:30 pm</p>	<p><u>Lecture 1</u></p> <ul style="list-style-type: none"> • What are Life Sciences? • Importance of Life Sciences in Our Daily Lives. • Thinking and Acting like a Life Scientist. <p><u>Laboratory 1</u> #</p> <ul style="list-style-type: none"> • Effectiveness of antiseptics and disinfectants on bacteria around us
<p>8 August 2024 (Thursday)</p> <p>9:00 am – 12:30 pm 2:00 pm – 5:30 pm</p>	<p><u>Lecture 2</u></p> <ul style="list-style-type: none"> • The Building Blocks of Our Bodies. • DNA – the Blueprint of Life. <p><u>Laboratory 2</u> #</p> <ul style="list-style-type: none"> • Extraction of DNA from fruits • Making plastic from milk and analysis of milk proteins
<p>13 August 2024 (Tuesday)</p> <p>9:00 am – 12:30 pm 2:00 pm – 5:30 pm</p>	<p><u>Lecture 3</u></p> <ul style="list-style-type: none"> • The Central Dogma: From DNA to Proteins. • The 20 Letters of Protein that Make Life Possible. <p><u>Laboratory 3</u> #</p> <ul style="list-style-type: none"> • Micropipetting and Gel Electrophoresis for DNA Analysis
<p>15 August 2024 (Thursday)</p> <p>9:00 am – 12:30 pm 2:00 pm – 5:30 pm</p>	<p><u>Lecture 4</u></p> <ul style="list-style-type: none"> • Unleashing the Potentials of Life Sciences. <p><u>Laboratory 4</u> #</p> <ul style="list-style-type: none"> • Expression of Green Fluorescent Protein (GFP) in Bacteria and Gel Electrophoresis for Protein Analysis.
<p>16 August 2024* (Friday)</p> <p>9:00 am – 12:30 pm 2:00 pm – 5:30 pm</p>	<p>Make up Class</p>

Students are required to wear lab coats when attending the laboratory sessions.

Date	6, 8, 13, 15, 16* August 2024 (28 hours)				
Time	9:00 am – 12:30 pm & 2:00 pm – 5:30 pm				
Teaching Mode	Face to Face (The Chinese University of Hong Kong)				
Enrollment	20 – 30				
Expected Applicants	Students who are promoting to or studying S2 – S5				
Tuition Fee	HKD 3,980.00				
Credit	2 Academy Unit(s) <i>Students can accumulate credits which will be regarded as “Other Learning Experience” when applying University.</i>				
Grading Methods		<i>Certificate</i>	<i>Assessment</i>	<i>Attendance</i>	<i>Credit(s)</i>
	Distinction	<i>Certificate of Distinction</i>	<i>Excellent</i>	>75%	2
	Pass	<i>Certificate of Merit</i>	<i>Pass</i>	>75%	2
	Attended	<i>Certificate of Attendance</i>	<i>Fail</i>	>75%	0
	Fail	<i>N/A</i>	<i>Fail</i>	<i>N/A</i>	0

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