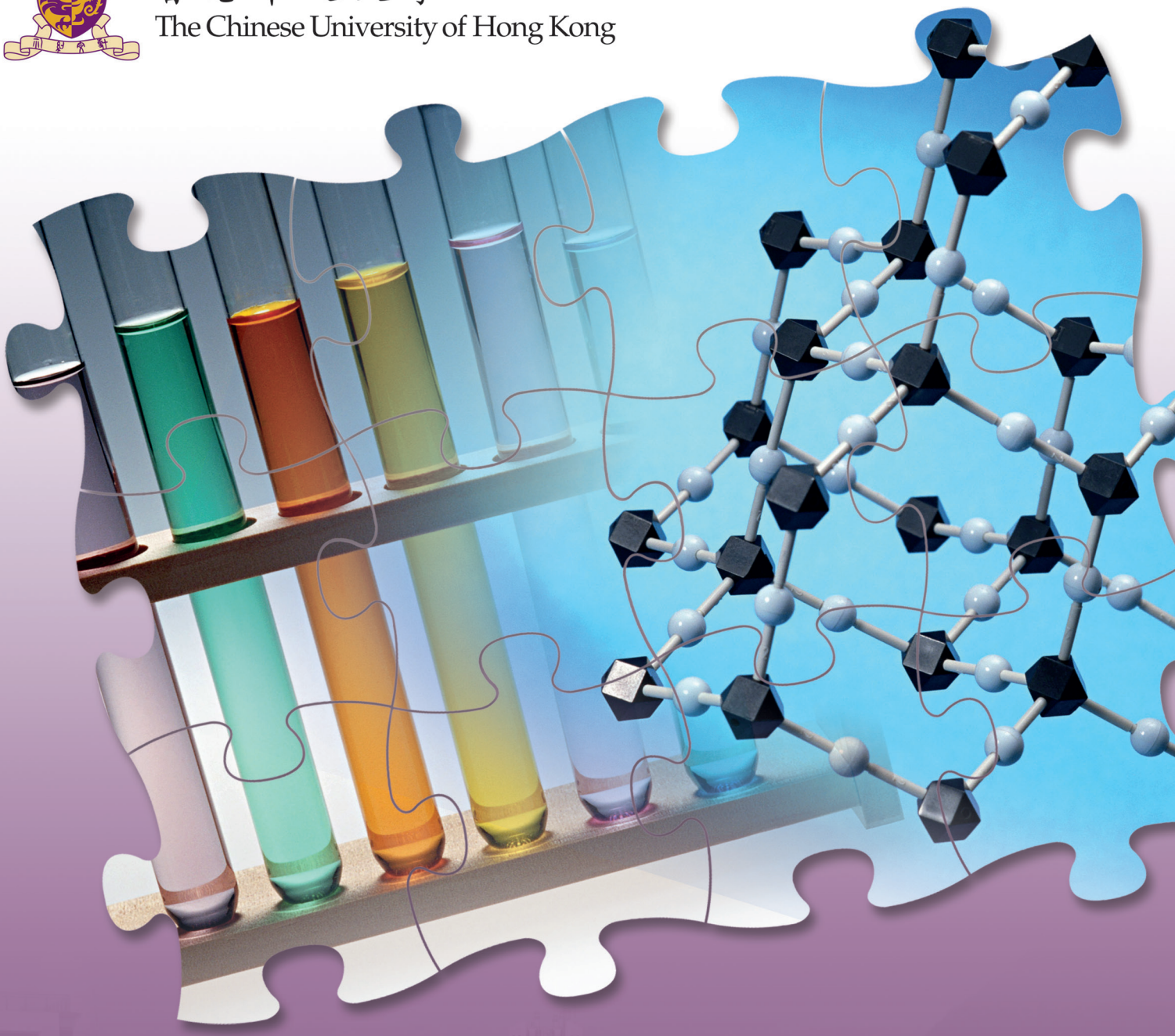
香港中文大學
The Chinese University of Hong Kong



Department of Chemistry
化學系

香港中文大學理學院
FACULTY OF SCIENCE
THE CHINESE UNIVERSITY OF HONG KONG

Department of Chemistry

Get to know us

Established in 1956, the Department of Chemistry remains as one of the largest and best-equipped departments in CUHK. Currently, our professors are engaging in all branches of frontier research, including synthetic chemistry, organometallic chemistry, chemical biology, polymer chemistry, theoretical chemistry, mass spectrometry, nanochemistry, electrochemistry, etc. With our effort, we are committed to nurturing future scientists. CUHK BSc. students **(JUPAS code: JS4601)** can declare chemistry major through the **Science Broad-based Admission Scheme**. Currently there are about 170 undergraduate and 120 graduate students enrolled in the Department. The Department of Chemistry offers:

Chemistry Programme

The Department of Chemistry provides solid training in general areas including analytical, inorganic, organic, physical and theoretical chemistry. In addition, students can choose from a wide range of elective courses according to their interest. Advanced and research-related courses are provided for students who need a solid background in chemistry for their further studies. Cross-disciplinary courses that focus on practical aspects such as forensic science, food testing, environmental analysis, pharmaceutical chemistry and coating chemistry are also available. In their final year of undergraduate study, students need to choose between problem-based learning and undergraduate thesis as a capstone project.

Undergraduate students in laboratory classes

Bachelor of Science in Biology and Chemistry Double Major Programme

Conscientiously devised by the Faculty of Science, Department of Chemistry and School of Life Sciences, the **Bachelor of Science in Biology and Chemistry Double Major Programme** is planned to equip students with enhanced broadness and diversity in both fields.

CUHK-University of Manchester Dual Undergraduate Degree Programme in Chemistry

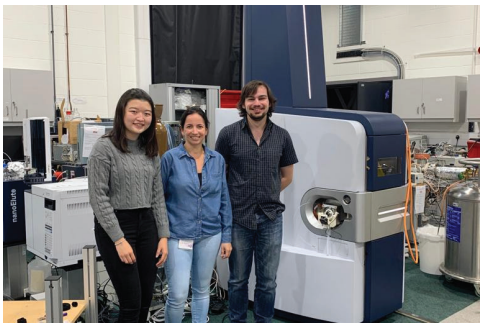
The Department of Chemistry of CUHK and the Department of Chemistry of the University of Manchester collaboratively offer the **CUHK-University of Manchester Dual Undergraduate Degree Programme in Chemistry**. In this four-year Dual Degree Programme, students will study at **CUHK** for the **1st and 2nd years**, and then at the **University of Manchester** for the **3rd and 4th years**. Upon completion of this Dual Degree Programme, students obtain two Bachelor Degrees of Chemistry (one from CUHK and one from the University of Manchester).

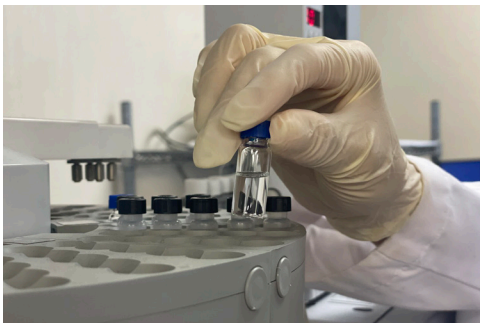
Science, Technology And Research Stream (STARS)

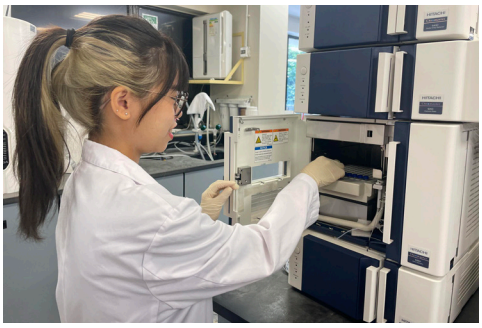
Hosted by the Faculty of Science, it intends to admit top students with strong ability and interest to gain wider exposure and research experience during their undergraduate studies. It aims at training future research scientists. Students will need to complete an experiential learning for not less than 4 consecutive weeks outside Hong Kong. It would extend students' exposure and thus make them appreciate new cultures, hone language skills, grow confidence, and prepare for a career in a globally connected world.

Clear articulation path

The Department offers graduate MPhil-PhD programme which involves coursework and a thesis embodying the results of original research. Normally, financial assistance in the form of postgraduate studentship is provided.







Internship opportunities to absorb experience

Internship opportunities in different sectors, including private companies, secondary schools and testing and certification labs, are available to students. These allow students to acquire hands-on experiences which enrich their learning, and gain exposure to chemistry-related industrial and commercial sectors.

Chan Yi Yan
Artec Chemical Company Limited
internship participant

"During the three months internship, I was fortunate to enter the research and development team. I was tasked with developing a new ingredient formula for products and had chances to use different kinds of instruments. The biggest reward in this internship is getting to know the importance of persistence and learnt from failures."

Mo Chulan
Graz University of Technology
exchange participant

"In terms of stepping out of comfort zone, it is not solely about external improvement such as building a new interpersonal relationship, but also about self-improvement such as developing confidence and knowledge. From my perspective, exchange is a great time to discover my potential while trying something new."

Cheung Cheuk Lam
Kansai University
summer research participant

"Through this exchange programme, I was able to experience the differences between local and international research environments, which provided me with new insights on my research of interest. Working in a completely new environment also allowed me to acquire new skills and knowledge."

International exchange to extend horizons

The Department provides Chemistry major students with exchange opportunities. The Faculty has also established collaborations with the top universities in Taiwan, e.g. National Taiwan University. Moreover, the University organises large-scale exchange programmes. In recent years, our students have spent a term or a whole year in Denmark, Japan, Singapore, Taiwan, Canada, etc. This enriches students' learning experiences.

Overseas summer researches to enrich knowledge

The Department has conducted summer research programmes outside Hong Kong, in addition to the local ones. Our students carry out summer research in top universities outside Hong Kong such as University of Warwick(UK), Kansai University(Japan), National University of Singapore(Singapore), National Tsing Hua University, National Central University and National Chiao Tung University(Taiwan).

COURSE STRUCTURE WITH HIGH FLEXIBILITY

1st Year	• Faculty package • Fundamentals in Physical Chemistry
2nd Year	• Student Oriented Teaching • Analytical Chemistry • Main Group Chemistry • Fundamentals of Spectroscopic Analysis • Organic Functional Groups: Structure and Reactivity • Atoms and Molecules • Thermodynamics and Chemical Equilibrium • Integrated laboratory courses
3rd Year	• Instrumental Analysis • Transition Metal Chemistry • Organic Reactions: Reactivity and Selectivity • Chemical Kinetics • Main theme laboratory courses • Two advanced Chemistry elective courses
4th Year	• Problem-based Learning or Undergraduate Thesis • Three advanced Chemistry elective courses

Faculty Package

Required:

- Principles of Modern Chemistry
- Essential Physics **OR** General Physics **OR** University Physics I – Introduction to Mechanics, Fluids and Waves

Electives (choose at least one course from the below list):

- University Mathematics for Applications
- University Mathematics
- Methods of Matrices and Linear Algebra
- Honours University Mathematics
- Biochemistry of Health and Disease
- Basic Concepts in Biological Sciences
- Introduction to Biological Sciences
- Introduction to Life Forms in the Biosphere
- Introduction to Statistics
- Statistics for Life Sciences

Advanced Chemistry Elective Courses

Examples of the Courses:

- Chemical Applications in Forensic Science
- Pharmaceutical Chemistry
- Industrial Chemistry
- Food Testing
- Environmental Analysis
- Accreditation of Laboratory Tests
- Chemical Biology
- Bioinorganic Chemistry
- Advanced Inorganic Chemistry
- Advanced Analytical Chemistry
- Quantum Chemistry
- Bioanalytical Methods
- Coating Chemistry
- Asymmetric Organic Synthesis
- Advanced laboratory courses

Inauguration Ceremony of Chemistry Society

WORK HARD, PLAY HARDER

Both the Department and Chemistry Society organise a wide range of social and recreational activities to interested students. Not only can it be beneficial to students' development, but it also creates a harmonious and friendly study environment.

Graduation Photo

AMPLE CAREER PROSPECTS

Our graduates' careers are highly diversified. Many of them are taking prominent positions in different sectors, including:

- Secondary school principals
- Professors / lecturers in local and overseas tertiary institutions
- Chemists and forensic scientists in government laboratories
- Scientific officers in the Department of Health and Environmental Protection Department
- Senior executive officers in chemistry-related businesses and industries
- Researchers in scientific research and development sectors

Graduation Dinner

DEPARTMENT OF CHEMISTRY | 化學系

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CUHK-University of Manchester Dual Undergraduate Degree Programme in Chemistry

Department of Chemistry
The Chinese University of Hong Kong

- One of the most research active departments in Asia-Pacific
- Four members of the Chinese Academy of Sciences
- Five Croucher Senior Fellowship awardees

Department of Chemistry
University of Manchester

- Has a very proud history since 1824
- 20th rank in the QS World University Rankings by Subject 2023: Chemistry
- Seven chemistry Nobel Prize laureates

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Through this Dual Degree Programme, students have in-depth learning experience from two different universities. The synergy from the universities provides widened technological exposure and enhanced scientific training to students. Students' global adaptability is strengthened through their stay at the University of Manchester for two years. Students also have a vast opportunity to learn with peers with diverse background and culture, and build up the skills and characters of being global citizens.

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MANCHESTER 1824
The University of Manchester

Course Pattern for Outgoing CUHK Students

1st Year (At CUHK)

- Faculty Package Courses
- University Core Courses
- Fundamental Chemistry Courses
- Elective Courses

2nd Year (At CUHK)

- Fundamental and Intermediate Chemistry Courses in all areas
- Practical Laboratory Courses
- University Core Courses

3rd Year (At UoM)*

- Intermediate Chemistry Courses in the areas of Organic, Inorganic and Physical Chemistry
- Practical Laboratory Courses
- Elective Courses

4th Year (At UoM)*

- Advanced Core Chemistry Courses
- Advanced Practical Training Courses
- Elective Courses

**** Students will only be required to pay the CUHK local tuition fee for the 3rd and 4th years of study at the University of Manchester***

Students will also be required to pay the fees that are applicable to regular degree students at the host university when studying there, e.g. textbooks, accommodation, student union fee, etc. and other extra costs incurred by studying overseas

Admission Requirements

To be officially admitted into the Dual Degree Programme, students may apply for the programme once they have been admitted into the CUHK BSc (Science) programme and meet all of the following requirements:

(1) Applicants should have outstanding performance in secondary school, with a particular emphasis on Chemistry and English Language.

(2) English language:

a) GCSE English Language Grade C (Grade 4 for applicants holding newly reformed GCSEs in England); or

b) IELTS (Academic) minimum 6.5 overall with no less than 6.0 in any component; or

c) TOEFL (Internet-based Test) minimum 90 with no sub-score below 20; or

d) an acceptable equivalent qualification.

(3) Outstanding major and overall GPA in CUHK Years 1 and 2.

(4) Passing the oral interviews conducted by CUHK and UoM selection panels.

Note: The Dual Degree Programme is not available to students admitted with advanced standing and senior-year entrants of CUHK.

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