

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



Learn

# SCIENCE

to Better the World



# CONTENTS

ABOUT CUHK 2

CUHK SCIENCE 4

STUDENT SHARING 10

- Bessie LAI
- Kyle LAI

UNDERGRADUATE PROGRAMME OVERVIEW 14

SCIENCE, TECHNOLOGY AND RESEARCH STREAM (STARS) 16

STUDENT SHARING 18

- Genper WONG
- TEE Jing Yi

EXPERIENTIAL LEARNING 22

- Internships
- Research Opportunities
- Student Exchanges

STUDENT SHARING 26

- James CHAU
- Musavvir KHAN

JOIN CUHK SCIENCE 30

- SCIENCE Broad-based Admission
- Admission Channels
- Scholarships and Financial Aid
- Enquiries

## ABOUT CUHK

Founded in 1963, The Chinese University of Hong Kong (CUHK) is a forward-looking comprehensive research university with a global vision and a mission to **combine tradition with modernity, and to bring together China and the West**. CUHK teachers and students hail from all around the world. CUHK graduates are connected worldwide through an extensive alumni network.

As a top university in Hong Kong and Asia, CUHK aims to nurture students with both specialised knowledge and wisdom for life. The education experience here is distinguished by a flexible credit unit system, a college system, bilingualism and multiculturalism. There are general education courses to broaden students' perspectives and develop in them the ability to face the challenges of contemporary society. CUHK has eight faculties (Arts, Business Administration, Education, Engineering, Law, Medicine, Science, and Social Science) offering a wide array of excellent undergraduate and postgraduate programmes.

CUHK undertakes a wide range of research programmes in many subject areas, and strives to provide scope for all academic staff to undertake consultancy and collaborative projects with industry. The University's insistence on the highest standards of research has won it an enviable research reputation.

Our beautiful 138.4-hectare campus overlooking Tolo Harbour is the largest and greenest in Hong Kong. It houses a range of facilities essential for an all-round campus experience, such as world-class libraries, art museums, music halls, swimming pool, sports fields, tennis courts, squash courts, water sports centre and gymnasiums.

**36<sup>th</sup>**  
in  
the World  
QS World University Rankings  
2025

**13<sup>th</sup>**  
Worldwide  
Times Higher Education's Most  
International Universities 2024

**1<sup>st</sup>**  
in  
Hong Kong  
U.S. News and World Report Best Global  
Universities Rankings 2024-2025

**138.4<sup>ha</sup>**  
Campus Area

**281,000<sup>+</sup>**  
total graduates  
(as of 31 December 2023)

**9,500<sup>+</sup>**  
hostel places

**21,000<sup>+</sup>**  
total current students  
(as of 31 December 2023)

**80<sup>+</sup>**  
undergraduate  
programmes offered

**8,900<sup>+</sup>**  
number of undergraduate  
scholarships  
(as of 30 June 2023)



# CUHK SCIENCE

Established in  
**1963**

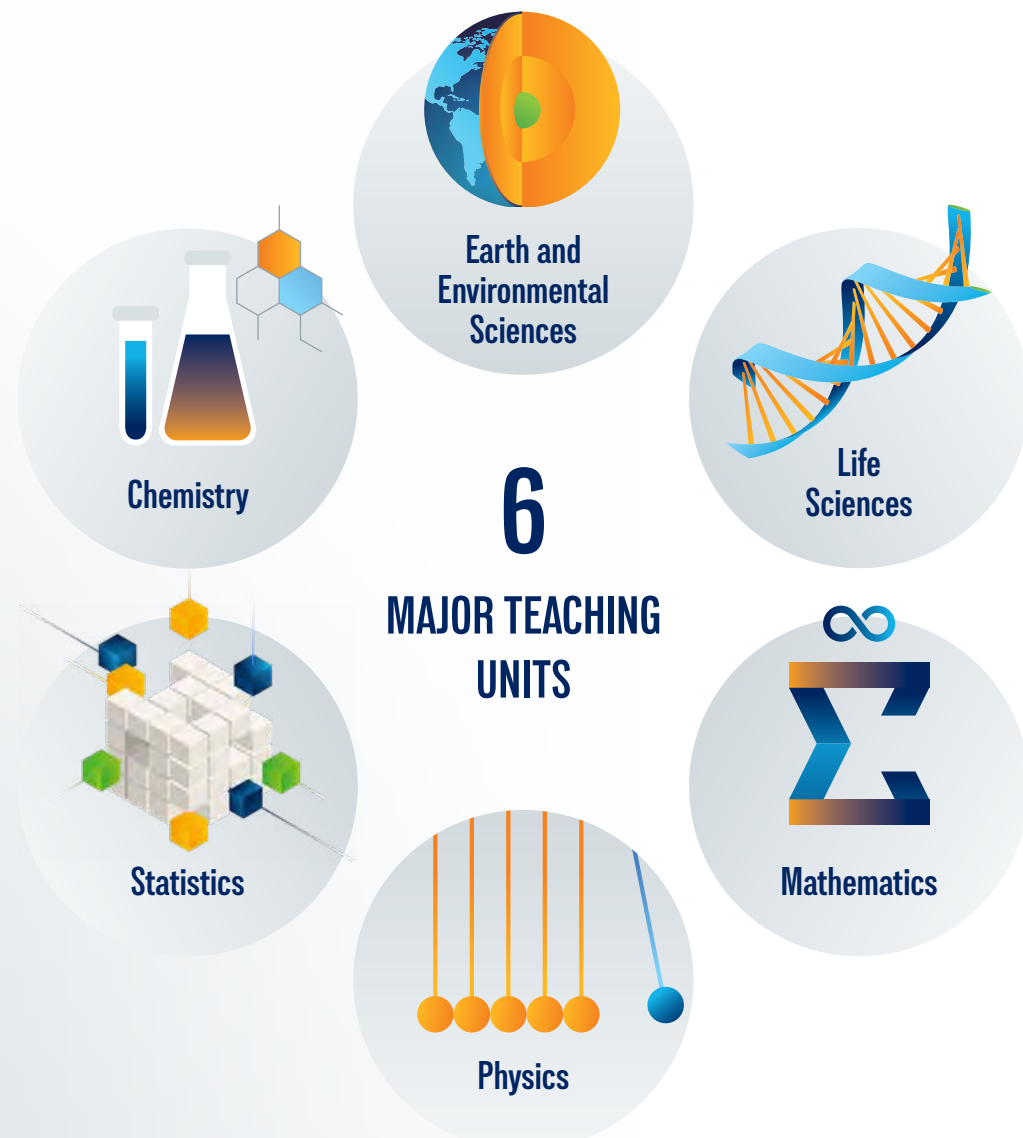
## Mission

To educate and inspire the next generation of scientific innovators and leaders;

and expand the frontier of human knowledge

Since 1963, the Faculty of Science at The Chinese University of Hong Kong (CUHK Science) has taken pride in providing the ideal environment for active scientists to learn and undertake research. The Faculty now offers a wide variety of undergraduate programmes and postgraduate programmes. A quarter of the students at the Faculty are working towards postgraduate degrees. We aim to provide a holistic science education whilst boosting learning with a liberal arts approach. We believe that this emphasises our students' development of independent and critical thinking, problem solving skills and creativity.

The Faculty now has six major teaching units offering a wide variety of undergraduate programmes with notable professors and world-class facilities, and is committed to research excellence.



**400<sup>+</sup>**  
Teaching and  
Research Staff

**2,600<sup>+</sup>**  
Undergraduate Students  
*(as of 31 March 2024)*

**1,100<sup>+</sup>**  
Postgraduate Students  
*(as of 31 March 2024)*

**20<sup>+</sup>**  
Undergraduate  
Programmes

**13**  
Research Postgraduate  
Programmes

**8**  
Taught Postgraduate  
Programmes



More than six decades on, our Faculty is now a world-class, research-oriented Faculty with leading scientific innovations across a wide range of disciplines. Our impressive list of faculty members and distinguished alumni attest to the fine level of research, teaching, and learning at our Faculty. They committed themselves to a wide spectrum of research areas, from astronomy and meteorology to medical and scientific advancement, with the aims of expanding the frontier of human knowledge and contributing to the improvement of human life.



CUHK Science is not only engaged in a relentless strive for education and research excellence on campus. We are also pioneers in enhancing teaching and learning development projects, as well as promoting public science education. Looking forward, our Faculty is determined to continue as a leader in scientific education and various pursuits. Higher education and academic research require great effort and can only be achieved by inspired and passionate students and faculty members. Therefore, we strive to provide a fun, stimulating, yet inspiring environment for members to achieve individual goals.

## Notable Professors

Our Faculty is very fortunate to have world-renowned professors whom contribute to the advancement of science at CUHK and engage in activities inspiring our students.



CUHK Science was honoured to invite mathematics maestro, Prof. YAU Shing Tung, Fields Medal Winner, to give a talk entitled "Tolo Homecoming – Reunion for CUHK's Diamond Jubilee" in 2023.

## Research Excellence

The Faculty is proud to be the home of more than a hundred dedicated scientists conducting cutting-edge research in various areas of science. Every year, our Faculty is awarded a great number of competitive research grants from many local, mainland Chinese, and overseas commissions, highlighted as follows:

- State Key Laboratory of Agrobiotechnology (CUHK)
- State Key Laboratory of Synthetic Chemistry (Partnership)
- AoE - Centre for Genomic Studies on Plant-Environment Interaction for Sustainable Agriculture and Food Security
- AoE - Centre for Organelle Biogenesis and Function
- AoE - Centre for Plant and Agricultural Biotechnology
- AoE - Probing the Fundamental Structure of Matter with High-Energy Particle Collisions

Our students have many opportunities to develop their research interest at the early stage of their studies. Science, Technology And Research Stream (STARS) offers students chances to learn from distinguished professors, participate in international conferences, and study abroad.

**2**  
Distinguished  
Professors-at-Large

**4**  
AOE Centres /  
Projects<sup>b</sup>

**7**  
Honorary  
Professors

**\$17M<sup>+</sup>**  
Scholarships  
Received<sup>c</sup>

**2**  
State Key  
Laboratories<sup>a</sup>

**31%**  
Non-Local  
Students

Our members  
are of  
**35<sup>+</sup>**  
Nationalities

Student Gender  
Ratio

- <sup>a</sup> With the approval of the Ministry of Science and Technology of China, CUHK has established a total of five State Key Laboratories.
- <sup>b</sup> The University Grants Committee (UGC) has provided preferential funding to the local tertiary institutions to conduct research into selected Areas of Excellence (AoEs). Out of a total of 32 such projects, 13 are led by CUHK researchers.
- <sup>c</sup> Science students received over HK\$17 million in scholarships in 2023-24.



Diversity and Inclusion

CUHK Science’s motto is **Science Empowers Your Dreams, Learn Science to Better the World**. Our Faculty firmly believes in the potential in every one of our staff and students. We recognise that our members come from various backgrounds, and we are committed to building a welcoming community founded on the core values of Openness, Civility, and Inclusivity. With due respect for one another regardless of our differences and ensuring that admission and progress for staff and students are only determined by personal merit and performance, we aim to be where you get closer to reaching your dreams.

Employment Survey of 2019-2023 Science Graduates



Science Career Fair serves as a platform with various types of activities, such as company exhibitions, professional development workshops, and recruitment talks.

What are our Alumni doing?



**Ms. May CHIM**  
B.Sc. in Earth System Science (2016)  
MPhil in Earth and Atmospheric Science (2018)  
Awardee of 2021 Croucher Cambridge International Scholarship  
Awardee of 2024 Croucher Postdoctoral Fellowship



**Dr. CHOI Pui Wah**  
B.Sc. in Biochemistry (2009)  
Ph.D. in Biochemistry (2013)  
Founder of WomenX Biotech



**Dr. CHU Wai Kit**  
B.Sc. in Molecular Biotechnology (2004)  
Research Assistant Professor, Department of Ophthalmology and Visual Sciences, CUHK



**Prof. Timothy TAM**  
B.Sc. in Chemistry (1999)  
M.Phil. in Chemistry (2001)  
Adjunct Professor, Department of Food and Health Sciences, THEi



**Ms. Constance TSE**  
B.Sc. in Cell & Molecular Biology (2022)  
Awardee of 2022-2023 Croucher Study Awards  
Ph.D. Student at University of California, Davis



**Prof. Stephen YAU**  
B.Sc. in Mathematics (1973)  
Professor, Beijing Institute of Mathematical Sciences and Applications (BIMSA)



**Mr. Eddie YU**  
B.Sc. in Physics (2005)  
Founder of ÖKOSIX



**Mr. Leo YU, JP**  
B.Sc. in Statistics (1992)  
Commissioner for Census and Statistics, Census and Statistics Department, HKSAR

(in alphabetical order by surname)



# STUDENT SHARING

## BESSIE LAI

**MAJOR** B.Sc. in Earth System Science (Year 5)

**STREAMS** (i) Atmospheric Science Stream  
(ii) Science, Technology And Research Stream (STARS)

**MINOR** Spanish

**HOBBIES** Reading, travelling, music



Sightseeing during my exchange at University of Oslo in Norway



Tips for people who are considering pursuing studies at CUHK Science

*Don't be afraid to try new things!*

*Seize every opportunity to broaden your horizon and explore your interests.*



Participating in a Climate Fresk Workshop on climate change during my exchange in Norway

Among the undergraduate programmes in Hong Kong, CUHK Science is unique as it offers a specialised stream in Atmospheric Science. **I am very interested in studying weather and climate quantitatively**, therefore I chose Earth System Science programme and started my journey at CUHK.

I joined Science, Technology And Research Stream (STARS) immediately after being admitted to CUHK. I received a lot of training on research related to climate change and ENSO teleconnection patterns under supervision of Prof. Francis TAM, like attending seminars, reading journals and reports, writing literature review, joining weekly research group meetings and presenting

relevant findings. During the process, I explored in-depth knowledge on ENSO teleconnection and had an early taste of a research career.

In the summer of Year 1, I took part in the Association of Pacific Rim Universities (APRU) Student Global Climate Change Simulation, an online role-playing programme. Students from different countries were invited to attend talks including topics like public health and deforestation. Students were assigned to teams to play the role of delegates representing different countries. Learning from this programme, I became aware of the difficulties to make decisions on international negotiation on climate change.

In Year 3, I participated in a term-time research exchange at the University of Oslo in Norway. I took two master-level courses to study more advanced knowledge related to Cloud Physics, and Upper Ocean Processes and Transport. Also, I was given the chance to visit the fluid dynamics laboratory and went on a boat field trip in the Oslo fjord. I took a scientific vessel, collected water samples and measured atmospheric data at different stations. It was a very memorable experience as I got hands-on experience in collecting marine and atmospheric data and observed how staff carried out their work.

All in all, I learnt a lot of advanced knowledge and gained research

experience during my studies. After graduation, I plan to continue studying in the field of Earth Science and pursue a master degree overseas.



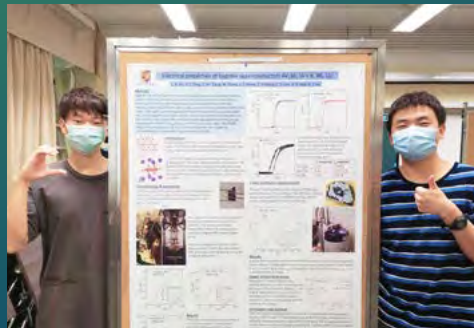
It is my honour to have received Dean's Honours List (3 times) and College Master's List during my studies. I am happy to be graduating soon.



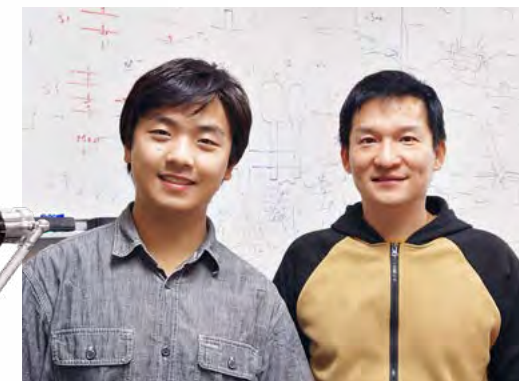
# STUDENT SHARING

## KYLE LAI

|   |   |
|---|---|
| <b>MAJOR</b>                                      | B.Sc. in Physics (2024)   |
| <b>STREAMS</b>                                    | (i) Enrichment Stream in Theoretical Physics<br>(ii) Quantum Science and Technology   |
| <b>HOBBIES</b>                                    | Reading scientific journals and forums,<br>chatting with friends, playing violin  |
| <b>SCHOLARSHIPS<br/>&amp; AWARDS<br/>RECEIVED</b> | C N Yang Scholarships<br>CUHK Admission Scholarship<br>Dean's Honours List (4 times)<br>HSBC Hong Kong Scholarship<br>Innovation and Technology Scholarship<br>Kong E Suen Memorial Scholarship<br>Physics Admission Scholarship<br>Professor and Mrs. Yau Wa Chan Scholarship<br>Professor Charles K. Kao Research Exchange Scholarship<br>Professor Joseph J Y Sung Scholarship |



Poster presentation in Summer Undergraduate Research Internship Programme (SURIP)



I had a great time conducting research at the University of Waterloo under the supervision of Professor MIAO

Tips for people who are considering pursuing studies at CUHK Science

*Do your research, identify your programme(s) of interest, seek advice from current/former students, and study hard to get admitted!*

How do you balance between your studies and other activities?

*Physics is a particularly demanding subject, so I dedicate a lot of time studying, but I make sure that I leave time to play and relax. I ensure that I attend lessons so there is no need to catch-up.*

Before deciding to come to CUHK for my degree, I compared different school options based on their curriculum, campus setting, and culture. CUHK Physics of course provides a great undergraduate curriculum, but what's more is that the University offers the College System, a scenic campus, and a strong culture of academic pursuit.

The structured autonomous learning style helped me hone in on critical thinking, language skills and other soft skills. In turn, these skills and my academic performance has contributed greatly to my success in securing a number of scholarships. In addition, when it comes to applying for scholarships, it's important to remain confident, believe in yourself, and never give up.

Physics is a fascinating subject for me, and in particular, I'm currently focused on Quantum Physics. Philip Anderson penned in his landmark essay in 1972: 'More is different', meaning that "at each level of complexity entirely new properties appear".

Thus far, I have had the pleasure of doing research under the supervision of three different professors, in CUHK in the summer after Year 2 under the direction of Prof. GOH Swee Kuan, and later under the supervision of Prof. GU Zhengcheng. In the summer after Year 3, I had the opportunity to conduct research at Prof. MIAO Guoxing's laboratory at the University of Waterloo in Canada as part of the Department of Physics' Summer Undergraduate Research Exchange (SURE) Programme. These experiences have been invaluable to my growth as a young scientist.

All in all, I've enjoyed a fruitful and eye-opening undergraduate experience at CUHK Physics. At CUHK, I'm especially grateful for my project supervisors Professor GOH and Professor GU for their valuable guidance on studying frontier research topics. I would also

like to thank Prof. CHU Ming Chung for providing me support and suggestions on many different decisions I have made. Furthermore, I must give recognition to Dr. TONG Shiu Sing, who inspired me to study Physics and consider choosing CUHK when he visited my secondary school.

I am heading to Pennsylvania State University (University Park) to pursue a Ph.D. in Physics. My focus will be on experimental research related to superconductors and topological quantum materials. **My goal is to contribute to the field of condensed matter physics by developing new materials.**



# UNDERGRADUATE PROGRAMME OVERVIEW



Undergraduate Programmes



Postgraduate Programmes

B.Sc. in Biochemistry

B.Sc. in Biology

B.Sc. in Biology and Chemistry / Chemistry and Biology <sup>a</sup>

B.Sc. in Cell and Molecular Biology

B.Sc. in Chemistry

B.Sc. in Earth and Environmental Sciences

B.Sc. in Food and Nutritional Sciences

B.Sc. in Mathematics

B.Sc. in Molecular Biotechnology

B.Sc. in Natural Sciences <sup>b</sup>

B.Sc. in Physics

B.Sc. in Risk Management Science

B.Sc. in Statistics

<sup>a</sup> Double Major Programme

<sup>b</sup> A 2-year programme for articulation of local Associate Degree / Higher Diploma Holders

## Joint-Faculty Programmes

B.Sc. in Biotechnology, Entrepreneurship and Healthcare Management

B.Sc. in Computational Data Science

B.Sc. in Learning Design and Technology

B.Sc. in Mathematics and Information Engineering

B.Sc. in Quantitative Finance and Risk Management Science

## Collaborative Double Major Programmes with CUHK (Shenzhen)

B.Sc. in Aerospace Science and Earth Informatics & Earth and Environmental Sciences

B.Sc. in Aerospace Science and Earth Informatics & Physics

B.Sc. in Interdisciplinary Data Analytics & Mathematics

B.Sc. in Interdisciplinary Data Analytics & Statistics

## Joint-Institution Dual Degree Options

with The University of Manchester [UoM]

B.Sc. in Chemistry [CUHK] and B.Sc. in Chemistry [UoM]

with The University of Edinburgh [UoE]

B.Sc. in Quantitative Finance and Risk Management Science [CUHK] and B.Sc. in Mathematics and Business [UoE]

B.Sc. in Risk Management Science [CUHK] and B.Sc. in Mathematics and Business [UoE]

B.Sc. in Statistics [CUHK] and B.Sc. in Mathematics and Statistics [UoE]



CUHK (Shenzhen)



The University of Manchester



The University of Edinburgh



# SCIENCE, TECHNOLOGY AND RESEARCH STREAM (STARS)

Undergraduate research has been an integral part of our curriculum, and CUHK Science offers extensive research opportunities to our undergraduates who are interested in research and wish to challenge themselves. STARS is intended for students with strong ability and interest to gain wider exposure and research experience during their undergraduate studies.

## Purposes of STARS

- To nurture students to have a broader exposure in Science
- To provide a clear path and guidance for students interested in doing research
- To offer research opportunities and training in an early stage
- To discover and develop talents

## Enrolment

Students admitted to CUHK Science majoring in Biochemistry, Biology, Cell and Molecular Biology, Chemistry, Earth and Environmental Sciences, Food and Nutritional Sciences, Mathematics, Molecular Biotechnology, Physics, and Statistics meeting the criteria in Phase 1 or Phase 2 are eligible to enrol.



### Phase 1 Newly Admitted Students

**HKDSE:**  
Obtained at least 3 stars from Biology, Chemistry, Mathematics/M1/M2, Physics

**Non-JUPAS:**  
Outstanding academic results upon admission

### Phase 2 End of Year 1

With Excellent academic performance in their First year of studies in CUHK Science

## Words from our STARS Alumni



Numerous Nobel laureates and world-renowned scientists were invited to speak at CUHK Science events to share their insights in science and research.

Be one of the STARS!



“

I developed the habit of attending research seminars to expand my horizons and develop a thirst for knowledge, facilitating me to explore the research field of my interest.

TEE Jing Yi

“

The seminar courses in STARS have trained me quite a lot on catching the gist of one presentation/topic and forming my own reflection.

YUAN Lin

“

STARS provided me research opportunities and hands-on experiences that consolidated knowledge that I learnt from various courses. Moreover, through STARS, I was able to learn new knowledge like machine learning and gravitational wave physics from my supervisors. It prepared me for doing research by giving me a taste of it while polishing my knowledge and computational skills.

NG Hoi Lun

“

I was able to gain up to 12 credits from performing research and attending seminars. This greatly relieved my number of courses or exams, allowing me to fully devote my time to research. I acquired complimentary experimental techniques and learnt how to approach scientific questions from both developmental and aging perspectives. STARS also supported my two-month internship in Poland, where I learnt patch clamping.

Genper WONG

“

STARS encouraged me to pursue studies overseas and do research at UC Berkeley. I not only equipped myself with a rich set of experimental and communication skills that improved my research ability, but also met a lot of excellent senior researchers and peers.

ZHANG Yuchen



# STUDENT SHARING

## GENPER WONG

|                          |  |
|--------------------------|--|
| <b>MAJOR</b>             | B.Sc. in Cell and Molecular Biology (2024)       |
| <b>STREAMS</b>           | Science, Technology And Research Stream (STARS)  |
| <b>HOBBIES</b>           | Hiking, playing piano, learning Latin and French |
| <b>INTERESTING FACTS</b> | Author of a book about HKDSE Chinese             |

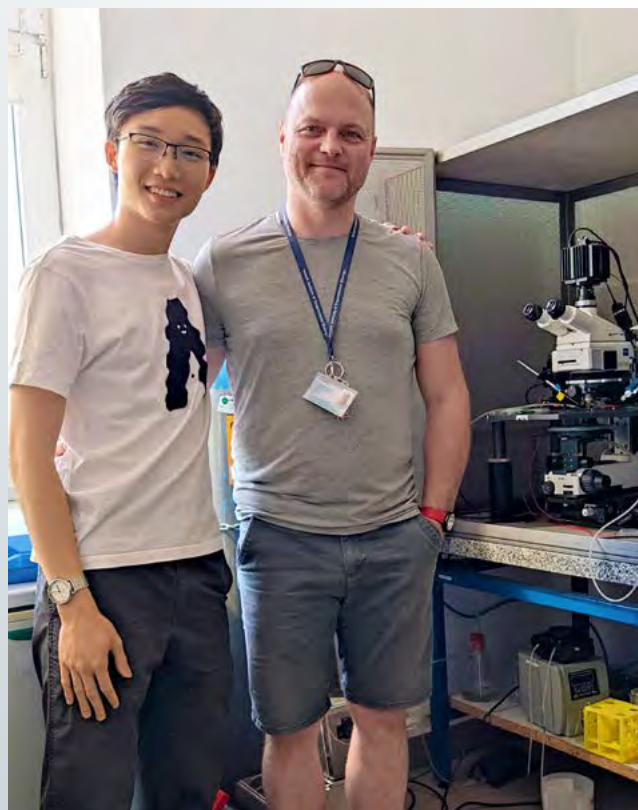


As a HKDSE Best 5 perfect scorer, what are your reasons for joining CUHK Science?

*I like the culture of CUHK. CUHK gives a more humanistic and modest feeling, with a focus on human connection and warmth. Research suits my personality and is also interdisciplinary. I always like to learn new things. Learning new techniques every year (e.g., patch clamping, data mining) is simply exciting.*

Tips for people who are considering pursuing studies at CUHK Science

*Foundation courses in the first two years are crucial - do not underestimate them.*



Research Intern at Professor WŁODARCZYK's lab in Poland

Academia may be a daunting place to be, but it provides me with the most intellectual satisfaction. **My dream is to further investigate the mechanisms of brain aging and propose therapeutics such as food supplements that are widely accessible to the public;** the next step in my journey will take me to Stanford University to pursue a Ph.D. in Neurosciences.

Thinking back to four years ago, I immediately joined STARS when I first enrolled at CUHK Science. STARS is a great platform to gain extensive research experience during my undergraduate studies. It allows me to fully devote my time to research in neuroscience by joining the research labs of Prof. KWAN Kin Ming and Prof. Kim CHOW successively. STARS also supported my two-month internship in Nencki Institute of Experimental Biology in Poland under the guidance of Prof. Jakub WŁODARCZYK, where I learnt patch clamping.

I have published a few journals during my undergraduate studies and I must express my deepest gratitude to Professor CHOW for giving me the opportunity. She encouraged me to participate in several projects simultaneously, and later allowed me to devise my own research project during my final year. She also motivated me to learn programming, which

I later found necessary for high-impact research. I laid the groundwork in research first by writing review papers under her guidance, which really sharpened my communication skills and enhanced my knowledge. It was also a good way to learn the basics of publishing. The rest would be hard work, spending quality time in the lab doing experiments and data analysis. The most important thing I have learnt is that science is storytelling - a paper should describe a coherent and logical story with supporting data.

### My Publications

**"DNA Damage Response-Associated Cell Cycle Re-Entry and Neuronal Senescence in Brain Aging and Alzheimer's Disease"**  
in *Journal of Alzheimer's disease* (First author)

**"Cross-talk between DNA damage response and the central carbon metabolic network underlies selective vulnerability of Purkinje neurons in ataxia-telangiectasia"**  
in *Journal of Neurochemistry* (Co-first author)

**"Chronic alcohol metabolism results in DNA repair infidelity and cell cycle-induced senescence in neurons"**  
in *Aging Cell* (Second author)



In addition to various undergraduate scholarships awarded, I also receive support from the Sir Edward Youde Memorial Fellowships for Overseas Studies 2024-25 and the Joseph Needham Merit Scholarship 2024 for my postgraduate studies.

In addition, I joined the Hong Kong Society for Neuroscience (HKSfN) as President and Co-founder since November 2021 to assist the Hong Kong neuroscience community both in research and public outreach. Besides inviting overseas scholars to give seminars and workshops, one of our highlights is the collaboration with the Hong Kong Foundation of Youth Groups. We have previously designed workshops for high schools to teach students the harmful effects of ketamine on the brain using hands-on experiments. Over 800 students from 20+ high schools have participated in the past two years and we were grateful that it was adopted into the Professional Ladder for Teachers by the Education Bureau.



# STUDENT SHARING

## TEE JING YI

|                |  |
|----------------|--|
| <b>MAJOR</b>   | B.Sc. in Chemistry (2021)<br>M.Phil. in Chemistry (Year 3) |
| <b>STREAMS</b> | Science, Technology And Research Stream (STARS)            |
| <b>HOBBIES</b> | Hiking, running, cooking                                   |



I come from Malaysia, and I am currently pursuing my second degree here at CUHK, after completing my B.Sc. in Chemistry in CUHK as well.

It has always been my dream to study overseas, and what attracted me at first about CUHK was its high international ranking, beautiful campus, and available scholarships. I remember meeting Prof. LEE Hung Kay at CUHK undergraduate admission interview in Malaysia, and unexpectedly, he's now my MPhil research supervisor!

Since high school, I have been captivated by Chemistry, especially its practical applications in various industries. I was eager to delve deeper into the study of Chemistry and expand my knowledge of its principles, theories, and real-world implications. That's why I pursued a bachelor's degree in Chemistry.

CUHK Science admitted me to the STARS programme, which provided me with a valuable opportunity to conduct research as early as the summer after Year 1. I had the privilege to join Prof. NGAI To's research group, where

I focused on studying polymer, surface, and colloidal chemistry. One memorable project I worked on was the Pickering Emulsion Polymerisation of core shell nanoparticles, during which I acquired important knowledge and skills.

After I graduated, I did not immediately apply to graduate studies, but worked as a Research Assistant at a university in Hong Kong. Engaging in research in a number of different institutions helped me explore different facets of Chemistry, while helping me pick up important laboratory skills and techniques along the way.

I'm grateful for the opportunity to pursue my MPhil under the guidance of Professor LEE, as I enjoy a strong sense of familiarity with the teachers and the overall environment at CUHK.

After I complete my MPhil, I plan on studying a PhD, then later work as a scientist in industry-focused R&D and **translate academic research outcomes to invent solutions that contribute to society.**

### My Publications

**"Physical strategies for geometric control of transition metal dichalcogenide atomic layers by chemical vapor deposition"**  
in *Advanced Physics Research* (Co-first author)

**"Wavelength-Dependent, Orthogonal Photoregulation of DNA Liberation for Logic Operations"**  
in *ACS Applied Materials & Interfaces* (Co-author)



Selected by CUHK Science to join Scientific and Cultural Exchange Programme at United Arab Emirates University in November 2019



Hiking with friends at Hong Kong



Spent one semester in Year 2 at the KTH Royal Institute of Technology in Sweden as an exchange student





# EXPERIENTIAL LEARNING

Our undergraduate curriculum aims at training well-rounded students who move on to be tactful contributors in society. The Faculty offers a diverse teaching and learning approach to ensure our students are exposed to the most suitable and effective learning methods, and become high-achieving, all-round individuals. In addition to our rigorous curriculum including lectures, tutorials, field work and laboratory sessions, we encourage all students to take part in a range of activities to increase their exposure and boost their university experience. Such activities come in the form of:



Through these experiences, students are able to enhance their ability to communicate and gain world perspective, which helps to prepare them for upcoming challenges in our ever-changing world.



[Learn More](#)



## Macro TUNG

**Internship at**  
The Hong Kong Jockey Club

**Arranged by**  
Office of Co-operative Education Programme



I strongly believe that acquiring experience through a placement in a prominent company is indispensable for the advancement of my future career, as it serves as a vital bridge between academia and the professional workplace. An over 6-month placement offers a significantly greater opportunity to develop both essential soft and hard skills compared to a mere 2-month internship.



## Justin CHAN

**Internship at**  
Hong Kong Observatory (HKO)

**Arranged by**  
Department of Earth and Environmental Sciences



I am grateful for a fruitful year interning at the HKO. Through this year, I have gained precious experience in research and learnt the operations and working routines of the HKO. During the internship, I also learnt a lot from my supervisors, especially about presentation skills and programming. Also, I joined the activities organised by the HKO such as visits to the automatic weather stations and the HKO Christmas Party. All in all, I really had an enjoyable time at this internship.

## Internships

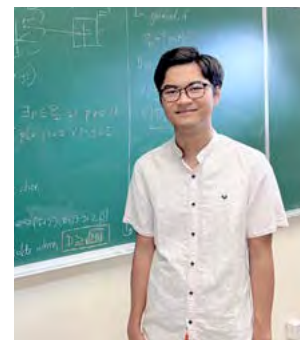
Taking part in an internship is a great way for students to acquire a better understanding of the working environment of a specific industry. It prepares them for employment, and helps them to establish networks before graduation. The Faculty collaborates with many partners around the world (ranging from scientific laboratories to banks; and from NGOs to corporates, etc.) to offer internship opportunities for our students, allowing them to have a taste of work and accumulate working experience, whilst getting to know other cultures.

**130<sup>+</sup>**  
employers joined  
**Co-op@CUHK** to provide  
opportunities for CUHK students



## AUNG Hein Thant

**International Competition**  
Simon Marais  
Mathematics Competition



I'm happy to join mathematics competitions, and took part in the Simon Marais Mathematics Competition as part of the CUHK team. Most recently, during Term 1 of Year 3, I entered with a partner as a pair, and we achieved the top 10.8% out of 249 pairs in the East Division!

## Research Opportunities

The Faculty operates a number of research schemes for undergraduates to take part in. Apart from working in professors' laboratories to conduct research in their areas of interest to better prepare themselves for their further studies, Undergraduate Research Exchange programmes are perfect opportunities for those who have a great interest to further develop skills and knowledge, as well as build a research profile. Students could opt to enter international competitions to attest their scientific finesse.

Examples of undergraduate internship and research programmes offered by major programmes:

|  |  |
|--|--|
| Young Scientist Mentorship And Research Training (SMART) Programme   | Summer Undergraduate Research Internship Programme (SURIP) |
| Dedicated Research Exchange And Mentorship (DREAM) Programme         | Summer Undergraduate Research Exchange (SURE) Programme    |
| Berkeley Biosciences Study Abroad (BBSA) Programme                   | Overseas Programme for Undergraduate Students (OPUS)       |
| China and Overseas Study, Internship and Exchange (COSINE) Programme | Hong Kong Observatory Placement Programme                  |



## GU Siyi

**Research Programme at**  
The University of California, Berkeley

**Arranged by**  
School of Life Sciences (BBSA Programme)



I have developed an interest in neuroscience since I was a freshman at CUHK. It has been great to have the chance to learn more about neuroscience at Berkeley. In addition, I was very honoured to join Prof. Stephan LAMMEL's lab, where I not only learnt new experiments, but also started to interpret the results as a scientist.



Student Exchanges

Want to spend a year, a term or a summer at another university? We have just the right thing for you!

Our students have access to a multitude of exchange programmes, and can spend time studying abroad. There are three types of exchange opportunities:

University-wide Exchange

College-based Exchange

Faculty/Departmental Exchange

Because of the broad range and flexibility of the available opportunities, we are almost certain that our students will find something that suits their desires.



OAL Website

For complete and update information on university-wide exchange, please refer to the Office of Academic Links (OAL) website.

270<sup>+</sup>

student exchange programmes

Formal partnerships with

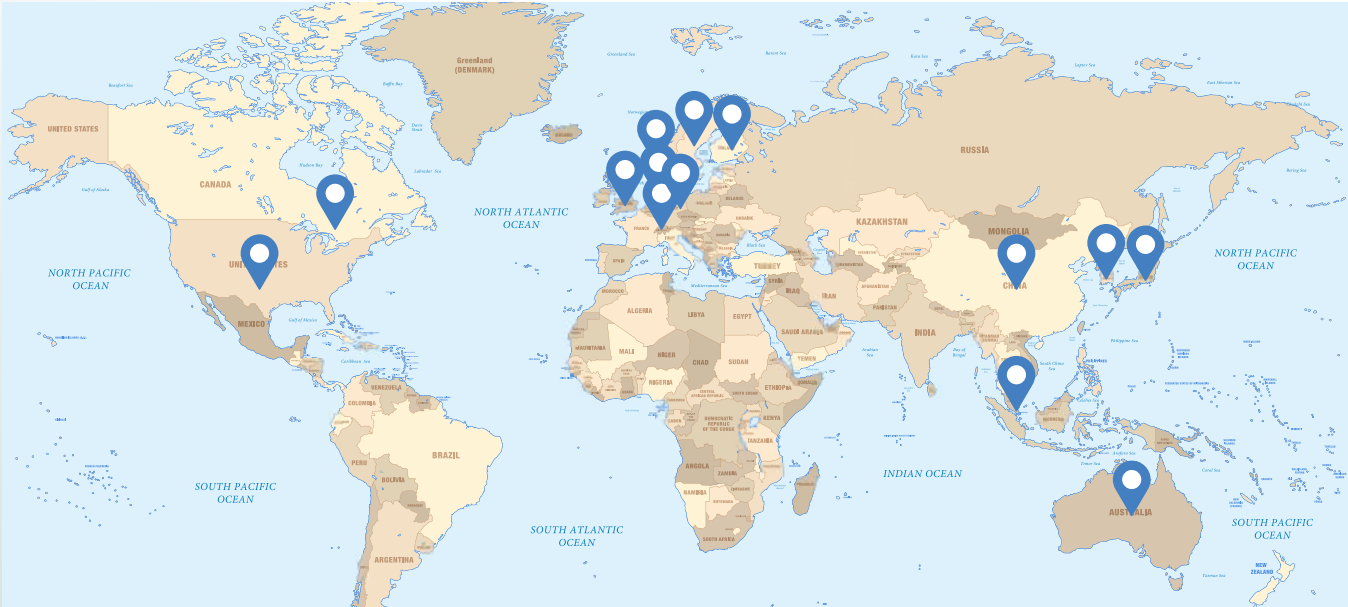
460<sup>+</sup>

institutions around the world

Global partnerships in

40<sup>+</sup>

countries / regions



Examples of Exchange Institutes:

- Brown University
- Cornell University
- ETH Zurich
- Karlsruhe Institute of Technology
- Korea University
- KTH Royal Institute of Technology
- Kyoto University
- McGill University
- Nanyang Technological University
- National University of Singapore
- Peking University

- Shanghai Jiao Tong University
- Technical University of Denmark
- The University of British Columbia
- The University of California, Berkeley
- The University of California, Los Angeles
- The University of Edinburgh
- The University of Helsinki
- The University of Manchester
- The University of Melbourne
- The University of Warwick
- Tsinghua University

- University College London
- University of Cambridge
- University of Illinois at Urbana Champaign
- University of Michigan
- University of Oslo
- University of Pennsylvania
- University of Toronto
- University of York
- Uppsala University



Sky KWAN

Institute

The University of British Columbia, Canada

Arranged by

Office of Academic Links (OAL)

Exchange experience has undeniably become a pivotal milestone in my life, shaping my perspective on life, education, and personal growth. It provided me with a profound sense of self-discovery and a newfound appreciation for the boundless opportunities life presents. Through the challenges, friendships, and adventures I embraced, I have gained a deeper understanding of my own strengths and passions.



Sorawich JATUPORNMONGKOL

Institute

The University of Warwick, United Kingdom

Arranged by

Department of Chemistry

The two-month exchange enriched my knowledge in research and inspired me to reflect and understand more on my life's pathway – past, present and future. This reflective process has become a guiding principle, in both academic and personal aspects. Currently, I am certain that I will pursue research and accomplish goal as a researcher.



Carson LAU

Institute

The University of Helsinki, Finland

Arranged by

Office of Academic Links (OAL)

I participated in an exchange programme at the Faculty of Agriculture and Forestry at the University of Helsinki in Finland during Term 2 of Year 4, supported by the Innovation and Technology Scholarship. I enriched my studies with courses not available in Hong Kong while advancing my atmospheric science studies, and also taking time to learn the local language and culture.



# STUDENT SHARING

## JAMES CHAU

|                |  |
|----------------|--|
| <b>MAJOR</b>   | B.Sc. in Mathematics (2024)                                    |
| <b>STREAMS</b> | (i) Computational and Applied Stream<br>(ii) Enrichment Stream |
| <b>MINOR</b>   | Physics  |
| <b>HOBBIES</b> | Playing badminton, reading, learning other languages           |

I have loved Mathematics since I was young. **Apart from computations, I am always curious about different theorems and proofs.** Having heard of the good learning environment and natural scenery of CUHK, as well as the good reputation of CUHK Mathematics, I decided to choose Enrichment Mathematics as my first choice in JUPAS.

Starting from Year 1, I took Honour classes and learnt how to handle advanced concepts from homework, home tests

and examinations. After taking lots of different exercises and reading lecture notes, I managed to understand the rationale of different proofs and techniques used, and overcome those obstacles. When I took senior undergraduate courses, some concepts were already covered in Honour class, enabling me to handle those courses easily. This experience also enhanced my self-learning skills and promoted my interest in reading different Mathematics books to learn more about different advanced theorems and their applications.



Joined an exchange at Nanyang Technological University in Singapore in the Summer of Year 3



Received Dean's Honours List (3 times)

As a HKDSE Best 5 perfect scorer, what advice do you have for people considering pursuing studies at CUHK Science?

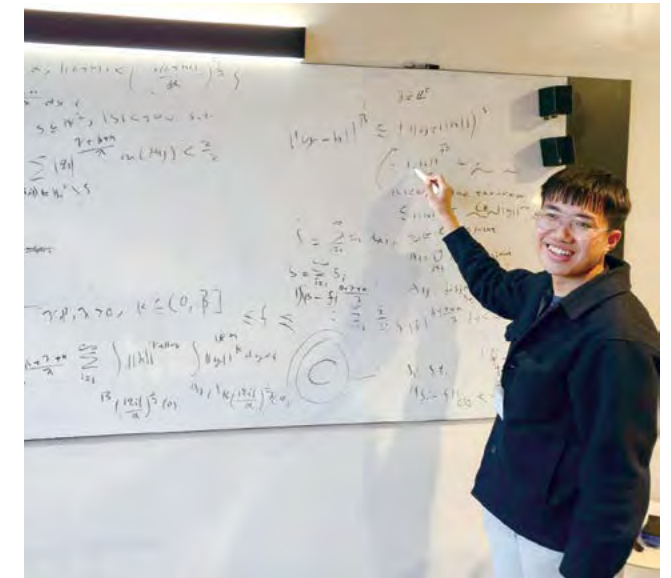
*Learning science at university is very different from secondary school. You can utilise online learning materials, like browsing websites and watching videos, to study on your own on more advanced topics.*

*Be proactive to grasp exchange and research opportunities provided by different units of the university.*

In the summer of 2023, I explored beyond my major, and joined an exchange at Nanyang Technological University in Singapore. During exchange, I learnt Malay and studied a course about Artificial Intelligence & Data mining, something entirely new to me. In the class, I often communicated with others mainly in English and Putonghua. This learning experience was tough but it was very interesting. I learnt how to embrace a new learning environment and overcome difficulties. This reminded me that I should be curious on every aspect of life and eager to try new things all the time, which is an essential characteristic in doing research in Mathematics.

I also participated in the COSINE programme offered by my major unit in August 2023 and got a chance to do research at the Australian National University in Australia under the supervision of Prof. YUNG Po Lam, who had obtained both his BSc and MPhil degrees from CUHK Mathematics. I was grateful that I learnt different ways to do research and eliminate misconceptions about doing research under Professor YUNG's supervision. This experience has been very rewarding and beneficial to my master's study in the future.

After graduation, I am going to take a Master Degree in Mathematics at the University of British Columbia, Canada. In the future, I plan to pursue a PhD and target to become a professor.



Joined the COSINE programme and presented research at the Australian National University in August 2023



# STUDENT SHARING

## MUSAVVIR KHAN

|                            |  |
|----------------------------|--|
| <b>MAJOR</b>               | B.Sc. in Risk Management Science (Year 5)  |
| <b>HOBBIES</b>             | Hiking, kayaking, painting, photography, playing squash and cricket, running, snorkelling  |
| <b>COMPETITIONS JOINED</b> | CHK Joint-U Tapeball Cricket Sixes (2021-22)<br>HSBC Investment Case Competition (2022)<br>Fidelity Student Innovation Challenge Case Competition (2022)<br>HSBC Run (2023)<br>JP Morgan Private Banking Case Competition (2023)<br>Standard Chartered Hong Kong Half Marathon (2023 and 2024) |



What are your reasons for joining CUHK Science?

*CUHK is one of the top ranked universities in the world. Within Hong Kong, CUHK has the best campus by far along with admission scholarship that made it an obvious choice for me.*

Tips for people who are considering pursuing studies at CUHK Science

*Surround yourself with people who want to excel in studies along with extra-curriculars.*

I'm Musavvir, currently a Year 5 student, from Bangladesh. This was my first time living independently away from my home country. Moving to Hong Kong has definitely been a huge change for me.

At first, I was accepted into the Science broad-based programme, which gave me the time and opportunity to explore various subjects and find my study interests. Initially, I wanted to study physics, however, after taking different courses, I found that Risk Management Science (RMSC) fits me best, as it **combines the theoretical essence of economics and finance with statistics and mathematics to quantify the uncertainties businesses face in day-to-day activities.** Hence, I chose RMSC as my major.

In Year 2, I was recruited as a part-time assistant tutor to help my instructor, Prof. Keith CHAN, to create e-learning materials for a RMSC course. This experience deepened my understanding of the course. At the same time, it gave me the opportunity to help my schoolmates to grasp the knowledge easily. Besides, I took a summer research internship at my major to gain more knowledge and skills related to my study field.



Having Cantonese cuisine with friends

Apart from studies, I participated in various extra-curricular activities and made friends with international and local students. In the summer after Year 1, I joined the CUHK Cricket Team and played tournaments, including CHK Joint-U Tapeball Cricket Sixes in 2021, with teammates coming from different regions.

To gain more industry experience, I joined three competitions – HSBC Investment Case Competition, Fidelity Student Innovation Challenge Case Competition, and JP Morgan Private Banking Case Competition. In the summer after Year 3, I received a six-month placement internship from HSBC at the Traded Risk Division under the Global Risk Analytics Department. By joining these activities, I gained advanced knowledge in related field and more exposure to current industry standards.

Thus far, I've been enjoying my time studying at CUHK and living in Hong Kong. I learnt a lot of Cantonese here, and tried Cantonese cuisine, like having dim sum with my friends on weekends. My professors, lecturers and staff are very kind and helpful, so Hong Kong has already become my new home!

In the future, I plan to get full-time job to gain some banking industry experience for a few years. After that, I may pursue further studies in a related field and then return to the industry with long-term career goals.



Worked as a photographer for CUHK International Student Association (ISA)



# JOIN CUHK SCIENCE



The Faculty of Science has developed a broad range of programmes to cater for students of different potential and interests. Two main admission schemes are designed to admit students, they are:

## SCIENCE Broad-based Admission

Biochemistry  
Biology  
Biology and Chemistry (Double Major Programme)  
Cell and Molecular Biology  
Chemistry  
Earth and Environmental Sciences  
Food and Nutritional Sciences  
Mathematics  
Molecular Biotechnology  
Physics  
Statistics

## Programme-based Admission

Earth and Environmental Sciences  
Enrichment Mathematics  
Enrichment Stream in Theoretical Physics  
Natural Sciences  
Risk Management Science

## Joint-Faculty Programmes

Aerospace Science and Earth Informatics & X Double Major Programme <sup>a</sup>  
Biotechnology, Entrepreneurship and Healthcare Management  
Computational Data Science  
Interdisciplinary Data Analytics & X Double Major Programme <sup>a</sup>  
Learning Design and Technology  
Mathematics and Information Engineering  
Quantitative Finance and Risk Management Science

The SCIENCE broad-based admission scheme has a flexible first-year curriculum, which allows students to explore their interests in different science programmes before declaring a major. There is no quota for a specific major, while ample academic advising will be provided to assist students in selecting their programme of study. Depending on their abilities, admitted students may be able to declare their major at the time of entrance, or at the end of Year 1 or Year 2 <sup>b</sup>.

- <sup>a</sup> Collaborative Double Major Programmes with CUHK (Shenzhen)  
<sup>b</sup> Students interested in the Biology and Chemistry Double Major Programme should declare their major at the time of entry or at the end of Year 1.



Major Declaration

Through different admission channels, CUHK Science admits students from all around the world. Applicants are required to fulfil both the University minimum requirements and programme-specific minimum requirements. For more information, please refer to the JUPAS website and the Office of Admissions and Financial Aid (OAFA) website.

## JUPAS Scheme <sup>c</sup>

For local students applying with Hong Kong Diploma of Secondary Education (HKDSE) results



## Non-JUPAS Local Admissions Scheme <sup>d</sup>

For local students applying on the strength of qualifications other than HKDSE



## International Students Admissions Scheme <sup>d</sup>

For non-local students who require a student visa/entry permit to study in Hong Kong



## National Colleges and Universities Enrolment System

For students from mainland China who are current Gaokao candidates



<sup>c</sup> Applications should be submitted online through the JUPAS Office website ([www.jupas.edu.hk](http://www.jupas.edu.hk))

<sup>d</sup> Applicants should submit their applications directly to OAFA, which will be considered on a case-by-case basis, taking into account of individual merits. Students with qualifications such as (but are not limited to) GCE/International A-Levels, International Baccalaureate (IB) Diploma, Associate Degree, Higher Diploma, high school diploma plus SAT/ACT and Advanced Placement (AP), UEC/STPM in Malaysia, OSSD in Canada, ATAR in Australia, GSAT in Taiwan or any other equivalent, are eligible to apply for admission.





## Scholarships and Financial Aid

University, Faculty and major programmes offer admission scholarships to both local and non-local new undergraduate students on basis of their outstanding academic performance. There is no need for students to apply for these scholarships. The respective funding units will identify qualified new students and inform the selected students of the scholarship offers.

In addition to admission scholarships, which are exclusively awarded to outstanding incoming students, there are numerous University and College scholarships available. These scholarships recognise students who demonstrate excellent academic achievement, leadership skills, community service involvement, and notable accomplishments in specific fields such as sports, innovation and creativity, music, and the arts. Some awards are also based on demonstrated financial need, covering full tuition fees or even providing allowances for living expenses.



Partial list of scholarships and awards available in recent years:

- AIA Scholarships
- AIG Hong Kong Scholarships
- CUHK Convocation Outstanding Services and Creativity Student Awards
- CUHK Vice-Chancellor's Scholarships for Excellence
- For Our Future Scholarship
- HKEX Foundation Scholarship for Biotechnology and Innovation
- HSBC Hong Kong Scholarship
- HSBC Overseas Scholarship
- Innovation and Technology Scholarship
- Li Po Chun Charitable Trust Fund Undergraduate Scholarships
- Nissin Foods Scholarships
- Reaching Out Award

- Sir Edward Youde Memorial Scholarships for Undergraduate and Diploma Students
- Swire Scholarships
- Talent Development Scholarship
- The Bank of East Asia Scholarship
- The Hong Kong Jockey Club Scholarships

The University and Colleges also offer various financial aid. For further details, please refer to the OAFA website and the websites of the Dean of Students' Offices of the Colleges.





Enquiries

|  |           |  |
|--|-----------|--|
| SCIENCE Broad-based Admission                                      | JS4601    | (852) 3943 6327<br>sfo@cuhk.edu.hk           |
| Earth and Environmental Sciences                                   | JS4648    | (852) 3943 9323<br>eesc@cuhk.edu.hk          |
| Enrichment Mathematics   | JS4682    | 852 3943 7988<br>dept@math.cuhk.edu.hk       |
| Enrichment Stream in Theoretical Physics                           | JS4690    | (852) 3943 6154<br>ugadm@phy.cuhk.edu.hk     |
| Natural Sciences   | Non-JUPAS | (852) 3943 3542<br>nsci@cuhk.edu.hk          |
| Risk Management Science  | JS4719    | (852) 3943 7931<br>rmsc@cuhk.edu.hk          |
| Aerospace Science and Earth Informatics & X Double Major Programme | JS4750    | (852) 3943 0800<br>aseidm@cuhk.edu.hk        |
| Biotechnology, Entrepreneurship and Healthcare Management          | JS4725    | (852) 3943 1264<br>behm@cuhk.edu.hk          |
| Computational Data Science   | JS4416    | (852) 3943 7931<br>statdept@cuhk.edu.hk      |
| Interdisciplinary Data Analytics & X Double Major Programme        | JS4760    | (852) 3943 0800<br>idadm@cuhk.edu.hk         |
| Learning Design and Technology                                     | JS4386    | (852) 3943 6950<br>ldte@cuhk.edu.hk          |
| Mathematics and Information Engineering                            | JS4733    | (852) 3943 8385<br>admin-mieg@ie.cuhk.edu.hk |
| Quantitative Finance and Risk Management Science                   | JS4276    | (852) 3943 0461<br>qfrm@cuhk.edu.hk          |



SCIENCE EDUCATION  
is the key to technological innovations.

Not only does it fuel economic growth  
in modern society,  
but it also benefits humanity  
in our daily lives.



Students' Videos

A collection of sharings and interviews with our students.  
Get a glimpse into the diverse student experiences studying  
at CUHK Science!





Please scan the QR code to read the online version.  
Thank you for supporting the environment.



香港中文大學  
The Chinese University of Hong Kong



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

Room 30, G/F, Charles Kuen Kao Building, Science Centre,  
The Chinese University of Hong Kong, Shatin, Hong Kong

☎ (852) 3943 6327

✉ [sfo@cuhk.edu.hk](mailto:sfo@cuhk.edu.hk)

🖱 [www.sci.cuhk.edu.hk](http://www.sci.cuhk.edu.hk)

📱 [f](#) [@](#) [X](#) [in](#) CUHKScience

📺 CUHKScienceFaculty

Information as of 31 August 2024, unless otherwise specified

Copyright © 2024 Faculty of Science, The Chinese University of Hong Kong. All Rights Reserved.