




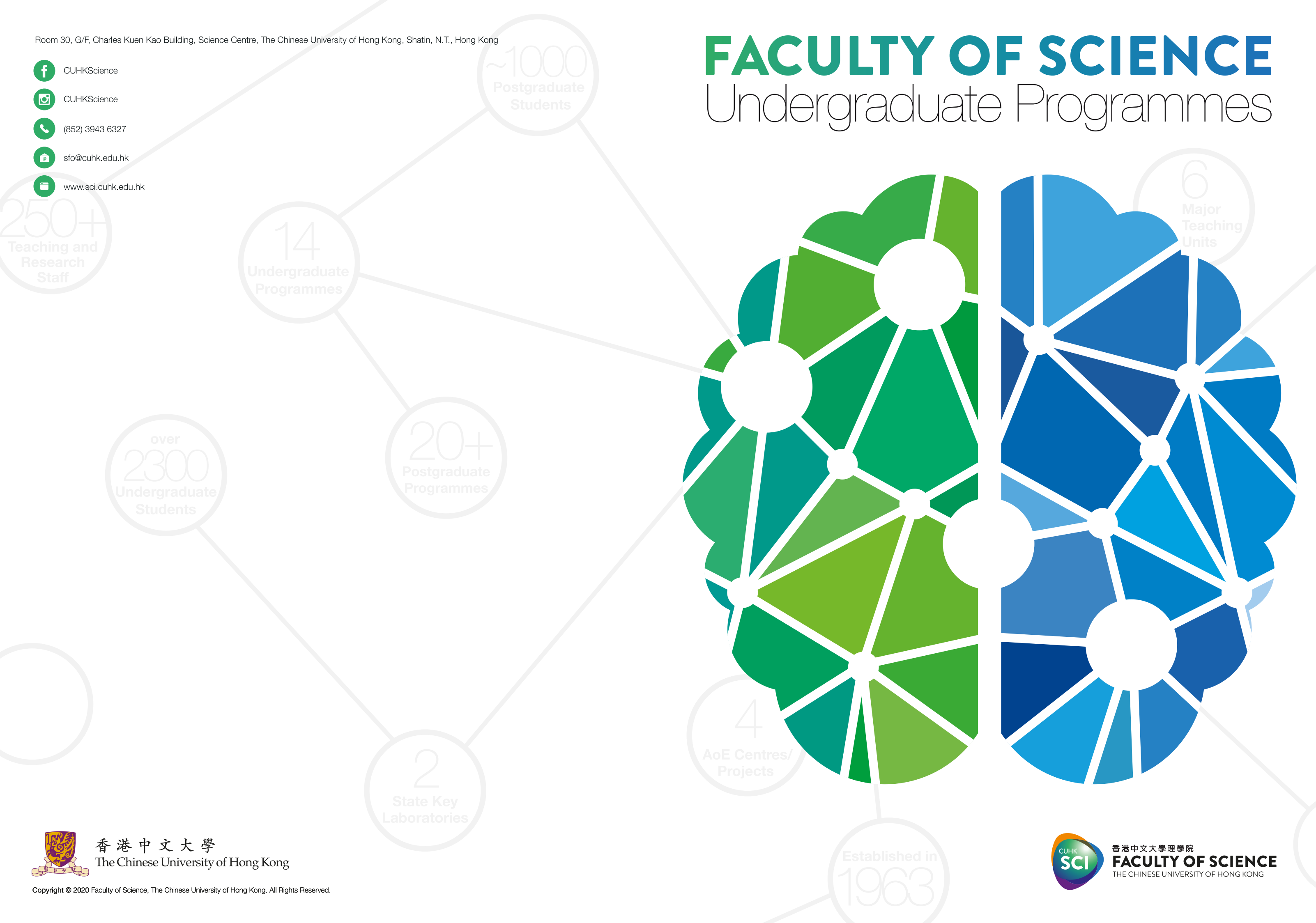


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FACULTY OF SCIENCE

Undergraduate Programmes



Science Empowers Your Dreams

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Science @ CUHK

“ 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. ”

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 has taken pride in providing the ideal environment for active scientists to learn and undertake research. The Faculty now offers 14 undergraduate programmes and over 20 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.

Fifty years on, our Faculty is now a world-class, research-oriented Faculty which leads 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.

The Faculty of Science is not only engaged in a relentless strive for education and research excellence on campus. Instead, 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 the forefront of scientific education and 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.

Faculty Introduction

Established in
1963

Undergraduate Programmes
14

Distinguished Professors
6

State Key Laboratories*
2

Undergraduate Students
2300+

UGC Award for Teaching Excellence
1

Teaching and Research Staff
250+

4
AoE Centres/
Projects #

#The University Grants Committee (UGC) has provided preferential funding to the local tertiary institutions to conduct research into selected Areas of Excellence (AoEs). Up to 2018/2019, UGC has awarded 24 AoE and 9 are led by CUHK researchers.

Honorary Professors
7

(As of Aug 2019)

“The Faculty now has six major teaching units offering 14 undergraduate programmes with notable professors, world-class facilities, and is committed to research excellence.”

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 stimulating our students.



Professor Yang Chen-Ning
(Nobel Laureate in Physics)



Professor Yau Shing-Tung (Fields Medallist and Wolf Prize Laureate)

(STARS) offers students chances to learn from distinguished professors, participate in international conferences and study overseas.

The Faculty is also involved in a number of centres and world-class facilities which are effective platforms for developing interdisciplinary research and promoting knowledge transfer.

- RGC-AoE Centre for Genomic Studies on Plant-Environment Interaction for Sustainable Agriculture and Food Security
- RGC-AoE Centre for Organelle Biogenesis and Function
- State Key Laboratory of Agrobiotechnology
- State Key Laboratory of Synthetic Chemistry
- UGC-AoE Centre for Plant and Agricultural Biotechnology

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, and overseas commissions.

Our students have many opportunities to develop their research interest at the early stage of their studies. Science, Technology And Research Stream



Major Teaching Units
6

School of Life Sciences

Department of Chemistry

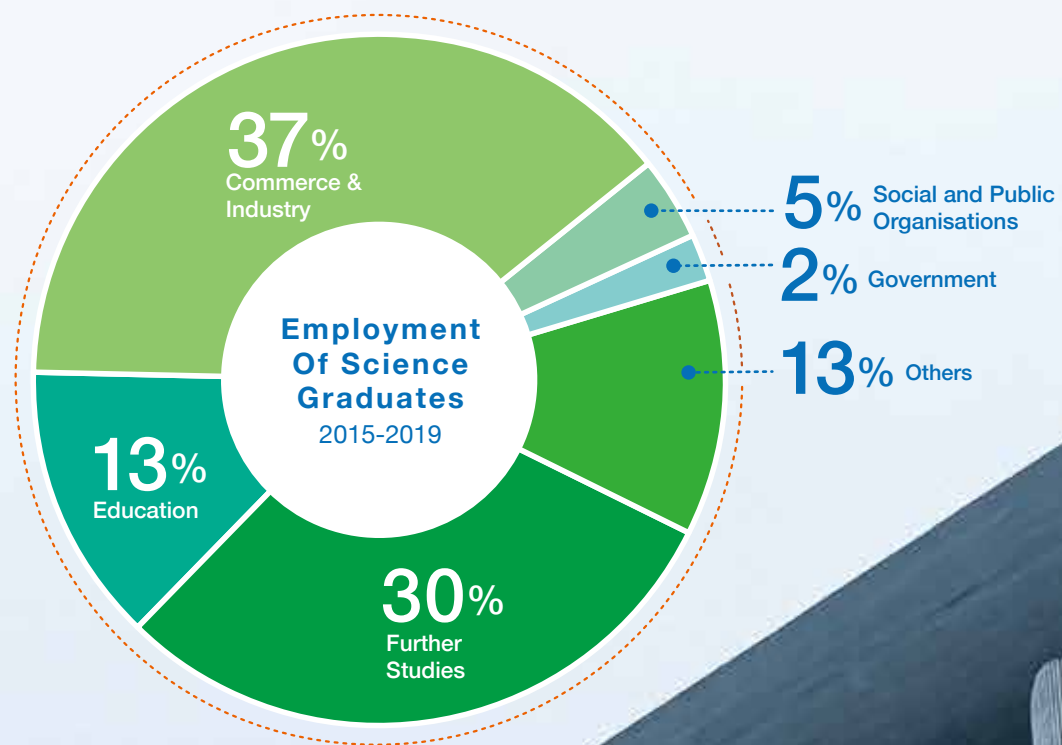
Department of Mathematics

Department of Physics

Department of Statistics

Earth System Science

Programme Overview



sharing

Chim Hoi Ying
(Environmental Science)

“ I spent my 2018's summer in the Eco-Education and Resources Centre as an intern. My job duties were to help prepare and organise the marine education camp; I taught participants the features of various marine habitants in Hong Kong through an interactive workshop, assisted them in making a 3D fish model, and prepared the touch tank activity. During my internship, I applied the knowledge that I learnt in marine ecology and improved my interpersonal and interpretation skills as I had to explain complicated scientific concepts to children aged 6 to 12 using simple words. Among all, knowing that participants all had fun and enjoyed from the meaningful activities was the most unforgettable.

Offering Unit	Programmes Offered	
School of Life Sciences	B.Sc. in Biochemistry	JS4601
	B.Sc. in Biology	
	B.Sc. in Cell and Molecular Biology	
	B.Sc. in Environmental Science	
	B.Sc. in Food and Nutritional Sciences	
	B.Sc. in Molecular Biotechnology	
Department of Chemistry	B.Sc. in Chemistry	JS4601
Department of Mathematics	B.Sc. in Mathematics	JS4601 / JS4682
Department of Physics	B.Sc. in Physics	JS4601 / JS4690
Department of Statistics	B.Sc. in Quantitative Finance and Risk Management Science #	JS4276
	B.Sc. in Risk Management Science	JS4719
	B.Sc. in Statistics	JS4601
Earth System Science Programme	B.Sc. in Earth System Science	JS4601 / JS4633
Natural Sciences Programme	B.Sc. in Natural Sciences *	Non-JUPAS

Jointly offered with the Faculty of Business Administration (Interdisciplinary Major Programme)

* A 2-year programme for articulation of local Associate Degree / Higher Diploma Holders

SCIENCE
JS4601

Biochemistry

Biochemistry is a branch of science that investigates the chemical compounds and processes occurring in living organisms at molecular level. The knowledge procured from the study in Biochemistry has found extensive applications in medicine and biotechnology that drastically revolutionize our daily life. Our programme aims to (1) provide concepts and mechanisms of biochemical processes, with emphasis on clinical and biomedical sciences; (2) provide training on the latest biochemical technology; (3) cultivate the ability of critical thinking, a proactive and responsible attitude and efficient communication skills for further study and career development.

HIGHLIGHTS

Our curriculum emphasises on current topics in biochemistry and molecular biology that have scientific, medical and social significance. Major study focuses include genetics and cell biology, protein and enzymes, bioenergetics and metabolism, methods in biochemistry and molecular biology, and biomedical and health sciences. Students can opt for a wide range of elective courses to attain professional knowledge in specialised disciplines such as clinical biochemistry, immunology, endocrinology,

neuroscience, forensic sciences and sports science, etc. Our curriculum also emphasises on experiential learning and personal and career development. These are achieved through self-study modules, small group discussion, hands-on laboratory training, independent research and workshops.

CAREER PROSPECTS

- Nearly half of our graduates pursue postgraduate studies in local or overseas universities

“

The programme is committed to contributing in the generation of new knowledge and in training of our younger generations on new and exciting developments that will revolutionise the concepts of life and applications of biological principles, for the benefit of our community.

”



sharing

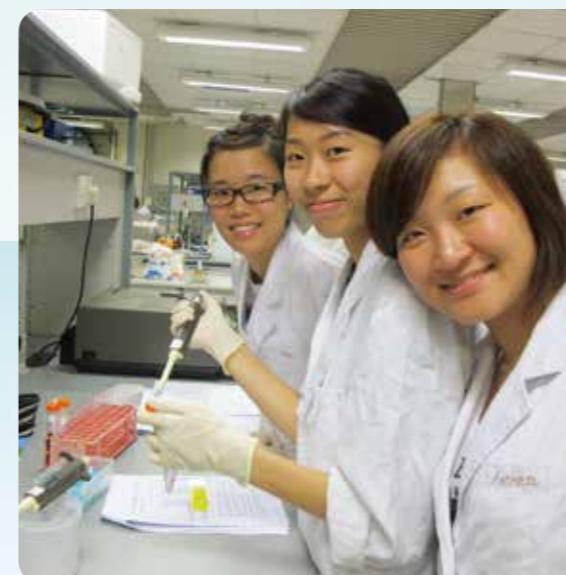
**Phoebe Tong (2018 Graduate)**

“

Choosing biochemistry as my major has been one of the best decisions I have ever made. Supported by an excellent and experienced teaching team, we are inspired to look for the hidden mysteries of life. The programme does not only provide us with the opportunity to learn in different research laboratories, but also supports overseas exchange programmes and research opportunities. As one of the committee members of the biochemistry student society, I have organised and participated in numerous activities of the programme. I really enjoy the warm atmosphere of this big family.

”

- About one fifth of our graduates have joined the medical and research laboratories
- Some other graduates have entered the education, commercial, industrial and government sectors



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SCIENCE
JS4601

Biology

“ While we have an emphasis on biodiversity and organismic biology, our programme provides students with high flexibility in course selection, so that they can always choose the courses which interest them the most. ”



sharing

T.S. Ho (2005 Graduate)
Assistant Principal
The Chinese Foundation Secondary School

“ Biology Programme had provided a holistic curriculum framework to prepare students for research and future career, with teaching laboratory sessions consolidating the concepts acquired in the lectures. The programme equips me with analytical mind, laboratory techniques and presentation skills for my teaching career, especially when leading my students to local and national Science competitions, and cultivating self-directed learning environment to foster Popular Science and Gifted Education at my school. ”

Biology is a broad scientific discipline embracing many different fields of study, including the functioning of living organisms from virus to human. Fundamental to the study of life is unfolding biological organization at its many levels, from molecular architecture to ecosystem services. The Department of Biology, now the Biology Programme, was established in 1963, and is one of the earliest departments in the University. We offer a broad range of courses for students to choose from, including genetics, physiology, plant biology, zoology, marine biology, and ecology.



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MISSIONS

- Prepare students for modern careers in biological sciences and related fields
- Provide students with knowledge on the latest advancements in biology
- Promote excellence in teaching and research in all levels of biological sciences from molecular biology to ecology

HIGHLIGHTS

Our major undergraduate programme provides students with immense flexibility in course selection and broad spectrum of curriculum that prepares

the graduates for a wide variety of careers. After consolidating and developing basic knowledge in science and biology, our students can specialise in an area(s) of interest to fit their career plan



by choosing one or more of the following study packages: Biology for Teaching Career, Organismic Biology and Human Biology.

The Biology curriculum not only includes formal lectures and laboratory sessions, but also provides students with ample opportunities for developing communication and presentation proficiency, and research and project management skills through tutorials, field trips, seminars and individually-supervised research projects.



CAREER PROSPECTS

With our comprehensive curriculum and training that encompassing a variety of fields in biological science, our graduates develop their career in various aspects including teaching, research, and related work in government or private sectors such as conservation and environmental protection, agriculture and fisheries, food

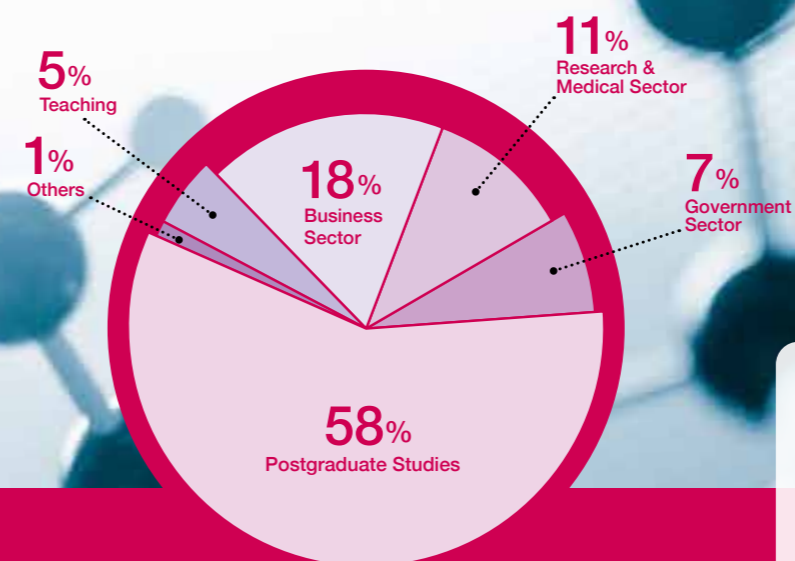
science, molecular science and health sciences.

SCIENCE
JS4601

Cell and Molecular Biology

“CMBI students receive intensive laboratory training and develop core skills in analytical thinking and scientific communication, all with the goal of preparing them to undertake future research-related works.”

CAREER PROSPECTS



sharing



Yuqi Tan (2014 Graduate)

“I am currently pursuing my Ph.D. in Computational Stem Cell Engineering at School of Medicine, Johns Hopkins University. CMBI Programme has prepared me in the best way possible to realise my dream of becoming a scientist. To me, the essence of the programme lies not only in its well-designed curriculum that honed my reasoning skills and enhanced my knowledge in the field, but also in the strong bond of friendships with my peers and the enormous support I received from the teaching staff. CMBI opened the door for me to experience various kinds of research, both locally and internationally through the "DREAM" programme. These opportunities have laid a solid foundation for my research studies at Johns Hopkins. Joining CMBI was definitely one of the best decisions in my life.”

Cell and molecular biology is an interdisciplinary field that represents the frontiers of biology and medicine. Advances in cellular imaging and multi-omics sequencing techniques have shifted the focus of modern biology towards understanding the functions of genes at the molecular, cellular and organismic levels. Launched in 2008, the Cell and Molecular Biology Programme (CMBI) offers an integrated curriculum that provides students a solid knowledge base in areas such as stem cell biology, cancer biology and molecular genetics. CMBI students receive intensive laboratory training and develop core skills in analytical thinking and scientific communication, all with the goal of preparing them to undertake future research-related works in cell and molecular biology and beyond.



HIGHLIGHTS

- An integrated programme of study covering cutting-edge research topics in cell and molecular biology on top of a solid knowledge base in life sciences
- Capstone courses conducted in small classes or through one-on-one teaching
- Intensive project-based laboratory research training
- Communication and logical reasoning skills essential for a successful career

AREAS OF FOCUS

- Research methods and Scientific communication
- Stem Cell Biology, Cell Biology of Cancer and Neuronal System
- Genomics, Transcriptomics & Metabolomics
- Contemporary topics in Cell Biology and Molecular Biology
- Fundamentals in Biochemistry and Genetics
- Independent research opportunities in Cell and Molecular Biology



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SCIENCE
JS4601

Environmental Science

“
Our mission is to train our students with the appropriate professional skills and techniques in addressing different environmental issues.
.....”

Environmental Science is an integrated science using the basic knowledge and skills of applied biochemistry, biology, and chemistry to assess and resolve environmental problems. In response to the growing public concerns about the environmental protection and conservation issues, the University established the Environmental Science Programme in 1994. We foster our students with training in ecology, environmental chemistry, pollution control, waste management, biodiversity, conservation, toxicology and health, energy research, environmental impact assessment, and policy development. Our body of lecturing staff comprises professors from the School of Life Sciences and Department of Chemistry, as well as other professionals from related disciplines.

CURRICULUM

STUDY FOCUS

- Ecology
- Environmental Chemistry
- Environmental Instrumentation Techniques
- Environmental Impact Assessments
- Environmental and Biochemical Toxicology
- Internship

ELECTIVE AREAS

- Chemical Treatment Processes
- Conservation Biology
- Environmental Biotechnology
- Environmental Protection and Pollution Control
- Environmental Health
- Field Study
- Hong Kong Flora and Fauna
- Marine Biology
- Methods in Toxicological Research
- Electives from other programmes

sharing

Claudia Lau (2020 Graduate)

“
The Environmental Science Programme has offered me interdisciplinary knowledge related to the environment, including environmental chemistry, toxicology, environmental impact assessments as well as environmental protection and management. The knowledge and skills that I have learnt in lectures, laboratory classes and field studies are intriguing and invaluable. In the final year of my undergraduate study, I have joined an internship programme which offered me a valuable opportunity to participate in various environmental education projects to deliver conservation messages to youngsters. Besides, I also joined a two-week field study in Kazakhstan to perform ecological investigation in the West Altai Nature Reserve and Charyn Canyon National Park. I find my four-year university life at CUHK rewarding and eye-opening. The knowledge and experience that I have obtained are invaluable to my future development.
.....”



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HIGHLIGHTS

A wide range of elective courses from:

- Chemistry and Earth System Science in the Faculty of Science
- Energy Environmental Engineering in the Faculty of Engineering such as Energy Utilisation and Human Behaviour, Atmospheric Science, Chemistry in Biofuel, etc.
- Geography and Resource Management in the Faculty of Social Science
- Public Health in the Faculty of Medicine such as Urban Environmental Problems, Ecosystem Restoration and Management, Hydrology and Water Resources, Biostatistics, Soil Science, Environment and Health, etc.

CAREER PROSPECTS

More than half of our graduates have directly involved in environmental related careers after graduation. They work in government departments, consulting firms, green groups, and commercial sectors focusing on various aspects of environmental issues, ranging from green purchasing, carbon audit, to environmental impact assessments and tree management. Some of them have stayed in academia by pursuing postgraduate studies or as researchers, whilst some others have joined the education sector as teachers, or the business sectors as administrators or marketing officers.

Our graduates could become environmental professionals by joining the HKIQEP (Hong Kong Institute of Qualified Environmental Professionals).

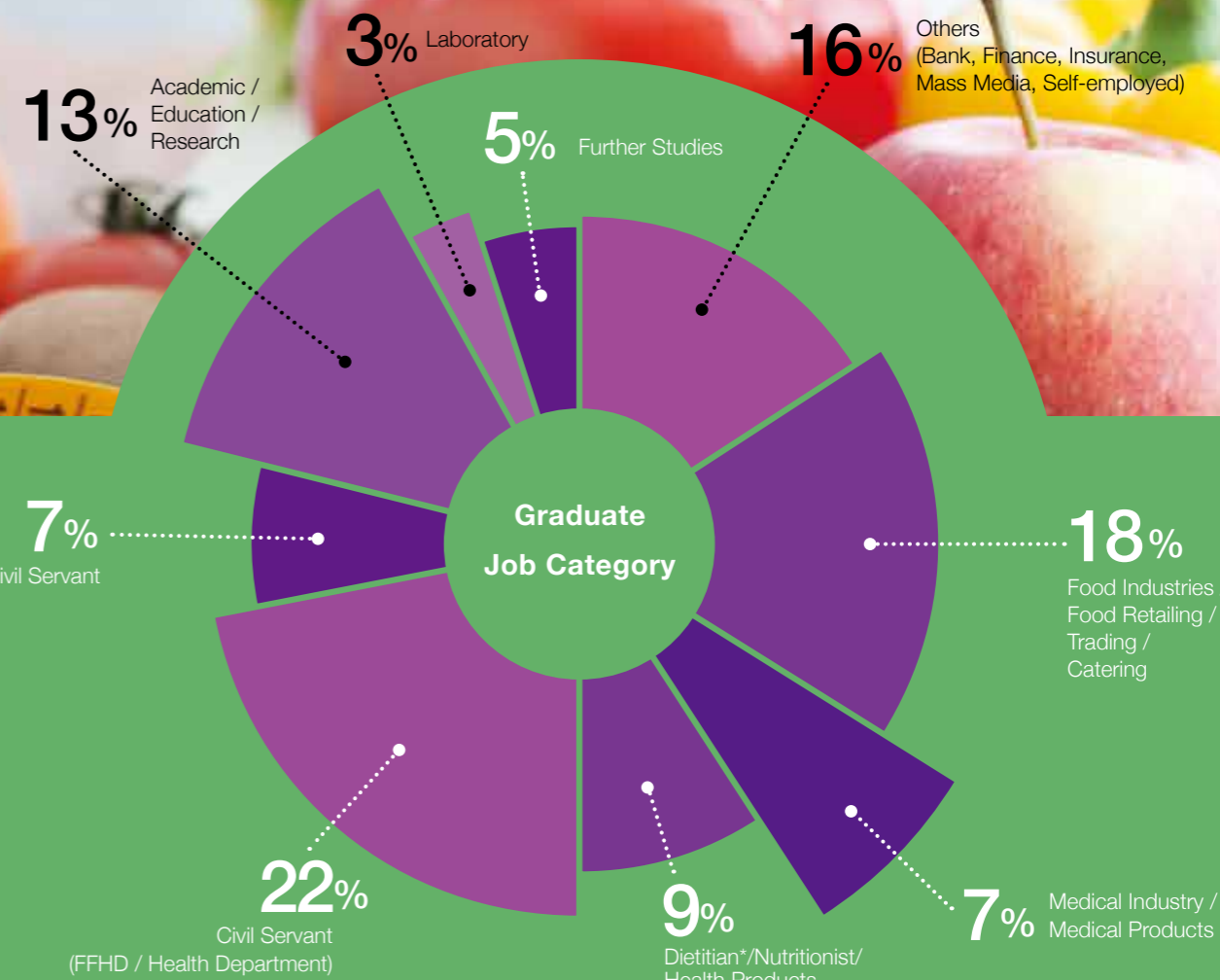
SCIENCE

JS4601

Food and Nutritional Sciences



“ To provide training to students on modern food and nutritional sciences, with an emphasis on the Oriental perspective. ”



Food safety and prudent diet safeguarding the quality of our lives have become increasingly important. The rapid advancement of nutrition knowledge and the expansion of the health food industry further pose new challenges as well as research opportunities in food and nutritional sciences. To cope with the increasing demand for specialists in these areas, the University started offering the Food and Nutritional Sciences Programme since 1994. Food is an integral part of human nutrition by providing the source of nutrients. Food science and nutritional science are two streams of study, but they are interrelated and inseparable. Students admitted to our programme will gain the basic and applied knowledge in both sciences. Equipping with such a strong foundation, our students would be well-prepared for any number of careers in the food and nutrition sectors. Besides, our programme also prepares students to pursue further study on dietetics, health sciences and food research.

HIGHLIGHTS

Our programme provides:

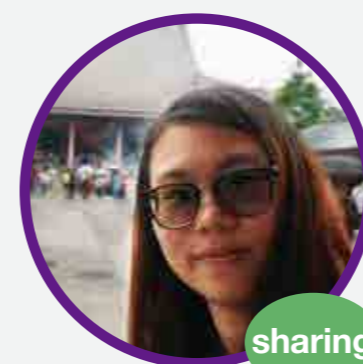
- Fundamental training in modern food and nutritional sciences, with an emphasis on the Oriental perspective
- Opportunities to acquire research and/or professional expertise to support the local food industry and the profession of nutrition



CAREER PROSPECTS

- Food-related Career (Industry): R&D, QA, Technologist, Marketing, Testing Lab and Auditing, Catering and Food Retail
- Food-related Career (Government): CFS Scientific Officer, DoH Research Officer, FEHD Health Inspector
- Nutrition-related Career: HA Hospital (Dietitian*, Programme Assistant) and NGO Nutrition Consultant, Health Care Nutritionist, Medical and Pharmaceutical Product Specialist

* Further training required



Bamboo Chook
(2018 Graduate)

sharing

“ I chose Food and Nutritional Sciences Programme as my major because it is more applicable and closely related to our everyday life. It includes the studies of both food and nutritional science, which are inseparable but actually two different disciplines. Food science mainly focuses on food itself, including food handling, manufacturing, and safety, while nutritional science investigates the nutrition needs of our body and how our body reacts to the nutrients. After taking those courses, we would be able to understand and explain most of the phenomenon that we usually come across in our daily life, such as why sugar becomes brown in colour after heating and why vitamin A is essential to night vision. The broad topics discussed in the programme are definitely an inspiring and valuable knowledge base for our future career or postgraduate studies in this field. ”

* Further training required



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SCIENCE

JS4601

Molecular Biotechnology

“
Students acquire hands-on operational skills in molecular biotechnology.
”

sharing



W.K. Chu (2004 Graduate)
Assistant Professor
Department of Ophthalmology & Visual Sciences, CUHK

“
I am very glad to study MBTE in my bachelor. The knowledge and experience I gained from MBTE indeed lead to some of the most amazing and life-changing opportunities including doing a D.Phil at Oxford and working as a scientist in Denmark. The trainings offered by MBTE are at the world-class standard. Connection is another key characteristic of MBTE. It is precious for MBTE graduates to be so close to each other. And for those who are joining our family, there are unlimited possibilities in your future careers. Not only restricted to biotechnology, but there are also various chances such as medicine, publication industry, legal practice and business consultancy. Welcome to MBTE!
”



Molecular biotechnology is a revolutionary area of scientific discipline that involves the application of gene and protein technology. This state-of-the-art technology has exerted remarkable contributions to agricultural health, environmental, bioenergy, and other bio-industrial areas. Molecular biotechnology is one of the major driving forces shaping the development of human society in the 21st century.

In view of the current needs of increasing manpower and future prospects of biotechnology, the University launched the Molecular Biotechnology Programme (MBTE) in 1998. We target students who are interested in genetic engineering, molecular biology, methods in biochemistry, medical, microbial, plant, and animal biotechnology. Other in-depth knowledge from an array of elective courses covering various aspects of cell and developmental biology, animal and plant physiology, immunology and clinical biochemistry, bioinformatics, genomics and proteomics are also provided for students' selection. In addition, we also address the business and social implications of biotechnology, such as government policy, management, intellectual property, and ethical and public concerns.

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MISSIONS

- To provide theoretical and hands-on training to students on the fundamental knowledge, current development, business and social implications of molecular biotechnology
- To cultivate the ability of logical and critical thinking, and scientific communications



HIGHLIGHTS

- Fundamental knowledge in life sciences with emphasis on molecular biotechnology
- Hands-on skills through specially designed laboratory courses on methods in molecular biotechnology
- In-depth knowledge in selected areas of your choice. Topics cover various aspects of challenging fields in biology & biochemistry
- Comprehensive understanding of the business and social implications of biotechnology, such as government policy, management, intellectual property, and ethical and public concerns



CAREER PROSPECTS

Ample job opportunities in business sectors, pharmaceutical industries, commercial biotechnology companies, laboratories, agriculture, law firm, education and government sectors. Graduates can also pursue postgraduate studies (Master or Ph.D.) in overseas or local universities.



SCIENCE

JS4601

Chemistry

sharing



Tsui Shu Wai (2020 Graduate)


“

My enthusiasm for Chemistry and Science has been developed into an abiding passion after studying Chemistry in CUHK, which I would describe as the best choice that I have ever made in my life. Apart from lectures, the Department offers field trip, overseas exchange opportunities, student-oriented teaching, problem-based learning and interdisciplinary seminars for us to integrate our knowledge and enhance our capabilities through these learning activities. The bonding among teachers and students is strongly enhanced. I participated in the Chemistry Olympiad 2018 as a member of the CUHK team, our professors and schoolmates stood by our side to support us throughout the competition. I was also glad to have studied abroad at University of Massachusetts -- Amherst in US as an exchange student. I met new friends from different countries like Lebanon and Ghana in such a culturally rich environment. The experience has opened my eyes about the other side of the world and reminded me to be a responsible global citizen!

”

“ Students participate in problem-based learning projects, where they have to solve authentic chemistry problems by conducting lab-based research work under supervision of instructors. ”

Established in 1956, the Department of Chemistry remains as one of the largest and best-equipped departments in CUHK. Currently, there are 19 professors and 3 research professors engaging in all branches of frontier research areas including synthetic chemistry, organometallic chemistry, chemical biology, polymer chemistry, theoretical chemistry, mass spectrometry, laser spectroscopy, etc.


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HIGHLIGHTS

The Department of Chemistry provides solid training in the four traditional areas, namely organic, inorganic, analytical and physical chemistry. Besides, cross-disciplinary courses which focus more on practical aspects such as forensic science, food testing, environmental analysis and pharmaceutical chemistry are available. In the final year, students need to choose between problem-based learning and undergraduate thesis as a capstone project.

Chemistry students should declare in one of the following streams:

- Main Stream: It is designed for students to have the highest autonomy in course selection.
- Enrichment Stream: It is designed for students who need a solid background in chemistry to pursue chemistry-related or research-

oriented careers. Students are required to take undergraduate thesis as the capstone project.

- Testing and Accreditation Stream: It is designed for students who are interested in establishing a career in testing and analysis. Students will be deployed to an accredited laboratory to work for 320 hours.

Experiential learning opportunities are always available to students to practise chemistry:

- Local and overseas research programmes
- Internships at local secondary schools and testing laboratories
- Short-term visits to overseas universities

Students with satisfactory academic performance are eligible to apply for scholarships.

CAREER PROSPECTS

The career of our graduates is highly diversified in different sectors. Many of them are taking prominent positions, 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





“ The department aims to provide high-quality mathematical trainings to students with diverse and flexible curriculum. ”

sharing

Alex Tung (2019 Graduate)

“ Studying mathematics in CUHK was humbling, yet enriching. Here, I met peers who seem to know infinitely more than I do; postgraduate students who understand mathematical jargon at ease; professors who are friendly and always eager to help. Every day, I learnt something from people in this intelligent community. ”



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JS4682 Enrichment Mathematics

This stream is specially meant for students who wish to delve deeper into mathematical theories or are interested in mathematical research. Also, it is suitable for students intending to proceed on higher studies and it helps students to consolidate mathematics foundation for further academic research.

JS4601 SCIENCE Broad-based Admission Scheme under the Faculty of Science

This scheme allows students to decide their majors at the time of entrance, or at the end of Year 1 or Year 2.

Students may select Mathematics as major which is a broad and holistic programme. It includes several stream choices, such as Enrichment Stream, Computational and Applied Mathematics (CAM) Stream and Computational Big Data Analytics Stream. The CAM Stream and Computational Big Data Analytics Stream increase the breadth of knowledge and ability of application for students.

HIGHLIGHTS

Wide Variety Curriculum

The Department offers a wide range of courses on both pure and applied mathematics. Students can

choose to take elective courses according to their interest and stream orientation.

Highly Flexible Curriculum

The students have a high degree of freedom in preparing for their favourite minor programmes. The most popular ones are computer-related programmes, business administration, and economics.

Experiential Learning Opportunity

There are plenty of summer training opportunities for our students. Apart from lectures, our undergraduates can also enrich their learning

experience in manifold activities in our COSINE (China and Overseas Summer Internship and Exchange) programme.

CAREER PROSPECTS

The career opportunities of a mathematics graduate are very diverse. Their skills can be used in different careers like banking, commerce, telecommunication, insurance, logistics planning, computer science, data analysis, finance, and engineering. Some may also pursue further studies in institutions abroad.

Physics

“ Physics students acquire a solid foundation and a basket of transferrable skills that empower them to perform well in postgraduate studies and in workplace. ”

Building upon a tradition of excellence in teaching and research, the physics curriculum continues to enable students to have a good grasp of fundamentals of physics and a basket of analytic, experimental, numerical, research, communication and other generic skills, and to appreciate and understand the important applications of physics in modern society.

HIGHLIGHTS

- A selected set of core required courses lays a solid foundation and delivers a basket of transferrable skills through various learning activities
- Elective courses allow students to explore their talent and interest in different branches of physics
- Enrichment Stream in Theoretical Physics (JS4690) places special emphasis on building research capabilities. It is particularly designed for students who are interested in academic research career

Streams of Study

- **Astrophysics and Particle Physics**
- **Computational and Data Physics**
- **Quantum Science and Technology**
- **Enrichment Stream in Theoretical Physics (JS4690)**

Research Opportunities

- Plenty of research opportunities in various fields of science: Nano Materials and Energy Materials,

Astronomy and Fundamental Physics, Quantum Science, Soft Matters and Complex Systems, Biological Physics and Quantitative Biology

- Teachers and students participate in international projects: Daya Bay Neutrino Experiment, ATLAS (CERN) and gravitational waves (LIGO)

Experiential Learning Opportunities

- Research / Exchange Programmes: Summer Internship Research Programme, Overseas Programme for Undergraduate Research Students (OPUS), Summer Undergraduate Research Exchange (SURE) programme and Study Tours
- Internship Programmes: Summer Teacher Apprenticeship programme, Internship programmes in the Hong Kong Observatory and the Hong Kong Space Museum

Scholarships and Grants

- Admission Scholarships
- Undergraduate Research Experience Grant (UREG)
- Many other scholarships including: Physics Prize, CN Yang Scholarship and etc.

CAREER PROSPECTS

Postgraduate studies in physics and related subjects at the doctoral or master's degree level in local and overseas universities (e.g. CUHK, Caltech, MIT, Princeton, Cambridge, Oxford)

Physics graduates have found employment in:

- Education
- Government, social and public services
- Industry, commerce and publishing industry



sharing

Lee Sze Him (2019 Graduate)

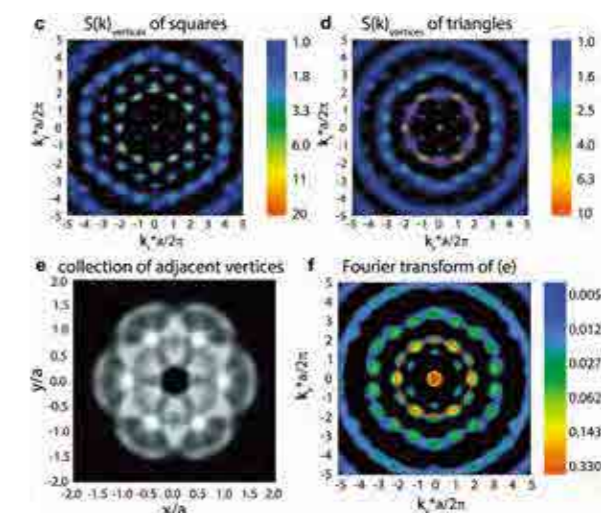
“ Physics Department has provided a very supportive environment for students, including me, to study effectively. Teaching assistants are helpful and always discuss physics topics with us in tutorials. Many Physics teachers offer undergraduate students opportunities with exposure to early research. The Department also offers a wide range of learning activities, both locally and overseas to us, such as summer research internship and overseas research opportunities. I have joined a study tour to visit the European Organization for Nuclear Research called CERN and other research facilities in Switzerland, which undoubtedly helped increase my understanding of how scientists carry out their work. All in all, I would say CUHK is a great place to learn and a place provides international opportunities and perspectives. ”



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New Pattern-forming Paradigm found by Professor Lei Xu's research group

Quantitative Finance and Risk Management Science

JS4276

Quantitative Finance and Risk Management Science

“ QFRM is one of the top programmes among all quantitatively related ones in Hong Kong in terms of admission credentials. ”



sharing

Ruby Hui (2019 Graduate)

“ QFRM is highly regarded in the banking and finance industry. The education and support that I received from QFRM helped me secure a summer internship in the Hong Kong Monetary Authority (HKMA) Banking Supervision Department. This internship offered me the opportunity to learn more about the supervisory policies of HKMA and the Basel Standards, a global regulatory framework for banks. I also experienced the stress testing scenarios used by foreign regulators and IFRS9 (International Financial Reporting Standard 9) practices in the industry. QFRM provided me with quantitative training that enabled me to understand complex credit risk modelling. This deeper understanding of industry practices has surely helped me pave the way for my career in risk management. ”



- www.cuhk.edu.hk/prog/qfrm
- (852) 3943 0461 / 3943 1853
- qfrm@cuhk.edu.hk

The B.Sc in Quantitative Finance and Risk Management Science Programme (QFRM) is jointly administered by the Department of Finance and the Department of Statistics. It combines the strengths and features of two well-established and highly successful programmes. QFRM is one of the top programmes among all quantitatively related ones in Hong Kong in terms of admission credentials.

HIGHLIGHTS

QFRM provides state-of-the-art training in business and finance, risk management science, mathematics and statistics, and computing applications. Students are also required to take Faculty Package and Capstone.

- Faculty Package and Capstone
- Quantitative Finance
- Risk Management Science
- Computing Applications
- Mathematics and Statistics

CAREER PROSPECTS

By offering comprehensive academic and professional training, QFRM aims to nurture competent finance and risk management professionals who can work in fields like investment banking, corporate and commercial banking, consulting, accounting and financial services, as well as general management. QFRM also enables students to build up a solid theoretical background for pursuing further study at Master or Ph.D. levels.

The internship programme allows students to acquire on-the-job training with participating companies. QFRM students on average have

completed 3 internships prior to graduation. Some examples of our internship partners are:

- Eurex Frankfurt AG
- Bank of China
- Royal Bank of Scotland
- J.P. Morgan & Chase
- Morgan Stanley
- Barclays Capital
- Standard Chartered Bank
- HKEX
- Commerzbank
- State Street Global Markets
- PWC
- Goldman Sachs
- Bank of East Asia
- Hang Seng Bank
- Ernst & Young
- HSBC
- BNP Paribas
- UBS Securities
- CASH Algo

- Hong Kong Monetary Authority
- Western Asset Management Company
- Bank of America Merrill Lynch



Risk Management Science



“ The programme is designed to fulfill the rising demand for professionals in the area of big data analytics and risk management. ”



sharing

Vincy Chen (2015 Graduate)
Operations Analyst at Goldman Sachs

“ The Programme of Risk Management Science was challenging but certainly rewarding to those who took the opportunity to develop themselves. Personally, the Programme provided me with analytical skills and the appropriate mindset to approach problems; I was not simply taught the solution, but gained the ability to understand the scenario, break down the problem into pieces and then derive the solution. This approach is helpful in a general sense, providing more possibilities after graduation, either in advanced studies or in professional careers across all fields. ”

The Programme of Risk Management Science has been the leading pioneer in nurturing well trained professionals in the risk management fields since its foundation in 2000. The Programme is suitable for students who have strong aspirations towards mathematical and scientific methodologies, and are interested in pursuing a career in the financial industry and related areas.



- www.sta.cuhk.edu.hk/rmsc
- (852) 3943 7931
- statdept@cuhk.edu.hk

HIGHLIGHTS

The curriculum of Risk Management Science is designed to equip students with the knowledge and skills to understand risk management from both theoretical and application perspectives in insurance, finance and other related areas. As risk management is an interdisciplinary subject, in addition to statistics, our students will receive a solid training in other foundation subjects including finance, economics, accounting, mathematics and computer science.

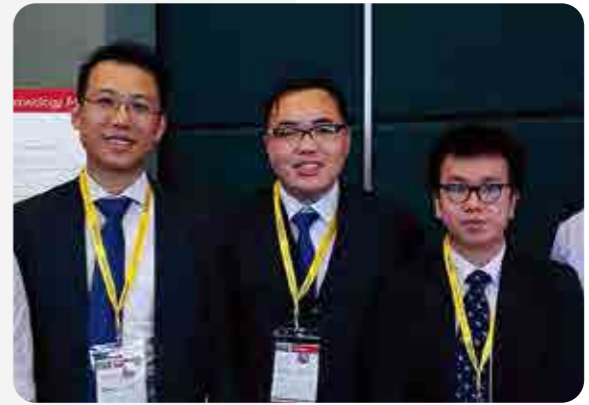
To meet the financial industry's increasing demand for data talents and experts in the epoch of Big Data, the Programme launches a new Risk Analytics study stream for elite students who are interested in pursuing frontier knowledge in big data and careers in the finance industry.



The Risk Analytics Stream places special emphasis on statistical science and computer science, including but not limited to subjects such as statistical inference, actuarial science and financial mathematics. Upon graduation, students are well-equipped to become professional risk managers with a strong background in data science and data analytics. Job referral services on internships and graduate jobs and opportunities for further studies will be provided to students of the stream.

CAREER PROSPECTS

- Investment Banks**
 - JP Morgan
 - Morgan Stanley
 - Goldman Sachs
 - BNP Paribas
- Retail Banks**
 - HSBC
 - Bank of East Asia
 - Standard Chartered
- Accounting Firms**
 - Deloitte & Touche
 - Ernst & Young
 - KPMG



- Insurance Firms**
 - HSBC Insurance (Asia)
 - Aon Hong Kong
 - AIA Company Ltd
- Government Services**
 - Hong Kong Monetary Authority
- Further Studies**
 - Ph.D. in Statistics, Operations Research or Financial Engineering
 - M.Phil., M.Sc. in Risk Management Science



SCIENCE
JS4601

Statistics



sharing

Sally Lam (2017 Graduate)

“ Through studying statistics, I have been trained to think deeply and critically when attempting to understand a problem, and to analyse data, explore meaningful findings and present them in a well-organised manner. During my summer internship as a big data analyst at the ParaDM Co., Ltd (arranged by the Statistics Department of CUHK), I proposed a regression model design and a hypothesis test for predicting the reading priority of a list of shared documents, thus leading to more efficient business decision making. The review sessions with my supervisors also enabled me to express my thoughts and discussed opinions with professionals. I believe my experience in these two months will be extremely helpful in my future career.

”

“ Students are required to engage in workshops, case studies and projects under the supervision of teaching staff, so as to broaden their statistical knowledge base, to hone their practical skills and to gain experience in handling real-life problems.

”

The Department of Statistics was founded in 1982. Our primary mission is to provide a quality education and undertake cutting-edge research. In today's Information Age, statistics has become an indispensable tool in business, social studies, engineering, medicine, clinical studies, genetics and marketing. In order to meet the increasing demand for well-rounded statistics graduates, we offer undergraduate programmes in Statistics, Risk Management Science, and Quantitative Finance and Risk Management Science (jointly administered by the Department of Finance). We also offer postgraduate programmes for students who intend to become experts in the field.



- www.sta.cuhk.edu.hk
- (852) 3943 7931
- statdept@cuhk.edu.hk

HIGHLIGHTS

The curriculum is designed to prepare students for careers in fields such as business, teaching and research. The curriculum covers the core of the subject and maintains a balance between theory and practice. Students are required to engage in workshops, case studies and projects under the supervision of teaching staff, so as to broaden their statistical knowledge base, to hone their practical skills and to gain experience in handling real-life problems. Students can choose to specialise in one of the three streams: Data Science and Business Statistics Stream, Statistical Science Stream, and Data Analytics Stream.



CAREER PROSPECTS

Our graduates readily find employment in business, insurance, banking and finance, information technology, Government and professional services. Positions include statisticians, research analysts, data analysts, traders, financial analysts, risk analysts, consultants, software engineers, programmers and teachers. Many of them now hold key positions in the civil service and in various private sectors. Some of our graduates continue their studies and pursue a higher degree in overseas and local universities.



Earth System Science

Source: NASA Goddard Space Flight Center

Earth System Science (ESSC) studies the dynamics of the Earth as an interrelated system that includes the atmosphere, biosphere, geosphere and hydrosphere, as well as human impacts. ESSC offers two streams, for students who want to pursue in-depth studies in either “Atmospheric Science” or “Geophysics”. Both streams provide students with training in the basics of these sub-disciplines and introduce useful quantitative tools.

HIGHLIGHTS

The ESSC programme provides students with solid scientific and mathematical foundation of the Earth System. The focus is on physical processes within different ‘spheres’, the interactions between them and how they shape the Earth's environment. Students who take this programme will be equipped with strong analytic and computational skills. They can build their research and career capacities via laboratory work, numerical modeling and programming, seminars, workshops and research projects.



sharing

Wong Ho Yi (2020 Graduate)

“

The academic training offered by the Earth System Science Programme covers not only knowledge in atmospheric science, but also multidisciplinary skills ranging from computer programming, statistics to mathematical skills. The comprehensive training has provided me with holistic understanding of climate change issue and equipped me with techniques for quantitative analysis which I can employ to analyse interesting topics like atmospheric science and meteorology. Apart from study, I also participated in various internship programmes such as the Hong Kong Observatory Summer Placement Programme. The precious work opportunities allowed me to apply skills that I have learnt in various courses and offered me hands-on experience to get ready for the transition from university to workplace.

”

“ Our programme equips student with the necessary knowledge, analytical and quantitative skills, as well as research experience to tackle the major challenge of the 21st century. ”



www.cuhk.edu.hk/sci/essc/
(852) 3943 5494 / 3943 9624
essc@cuhk.edu.hk

CAREER PROSPECTS

Students can pursue further studies in Earth System or related sciences, or they can embark on careers in education, weather and climate services in the government or private sector, NGOs, environmental consultancy, exploration of natural resources including petroleum and natural gas, geotechnical engineering, information technology, data analytics and other sectors requiring strong quantitative or analytic skills.



Natural Sciences
Non-JUPAS
only

Natural Sciences

The Faculty of Science is dedicated to educating and inspiring the next generation of scientific innovators and leaders. The B.Sc. in Natural Sciences programme (NSCI) is a senior year programme that designed in answer to the growing need for opportunities for further study among sub-degree holders. The way of learning science and the professional skills that are embedded in science programmes help develop students with life-long learning abilities and equip them with knowledge, skills and attitudes that are essential to be leaders of the rapidly changing world with ever-advancing technologies.

This programme strives to provide a rigorous training in the sciences so that graduates will have acquired broad knowledge in science and in-depth knowledge across several science subjects, mastered a basket of professional and generic skills for career development, and developed attitudes and values with a view to contributing to the advancement and betterment of the society.

sharing



Siu Yan Hin (2020 Graduate)

“After completing my Higher Diploma degree, I decided to further pursue my study at CUHK for the Food and Nutrition concentration under the Natural Sciences Programme. The programme is a great one. It provides me with lots of opportunities to probe deep into my interest and apply the knowledge I have learnt in different courses practically. I like the learning atmosphere at CUHK. I keep close relationship with my classmates; we work together for presentations and projects, motivate each other to learn and join different meaningful activities such as volunteer work and ambassador programmes. And all are preparing me for my future career as a nutritionist.”



-  www.sci.cuhk.edu.hk/nsci
-  (852) 3943 3542
-  nsci@cuhk.edu.hk

HIGHLIGHTS

The Natural Sciences Programme, supported by 13 programmes of the Faculty of Science, covers a wide range of science disciplines. The normative study period for this programme is two years, during which students must complete at least 51 units of science courses, including 32 units from one of the seven concentration areas.

There are more than 300 multidisciplinary science courses open to Natural Sciences students, which provide large flexibility for students to tailor-make their own study pattern based primarily on their personal interests and specialties.

CAREER PROSPECTS

Graduates of this programme can look forward to career opportunities similar to those available for graduates of four-year science programmes. Many of our graduates started their career in commercial laboratories; parts of the remaining graduates found employment in education related sectors and government departments. Some graduates with good academic performance pursued postgraduate studies.



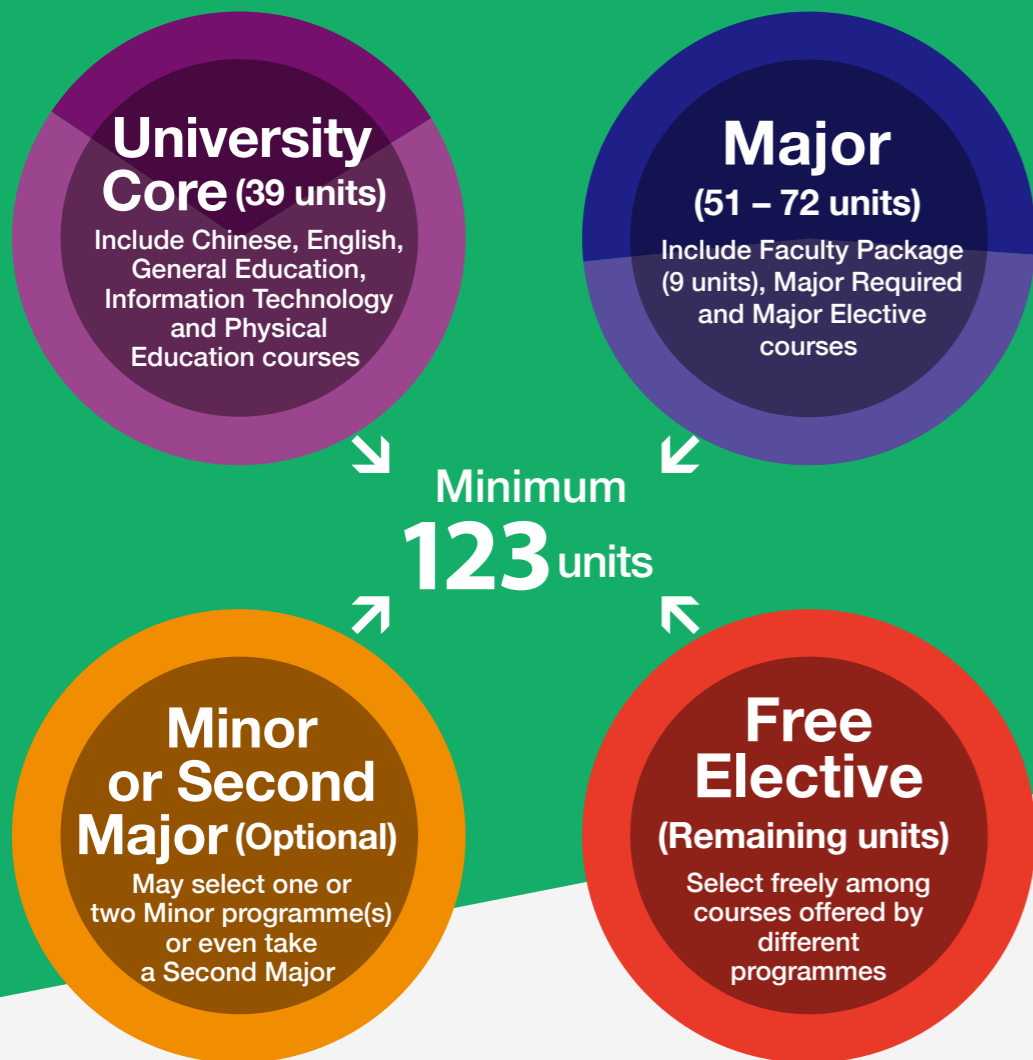
CONCENTRATION

- Biological Sciences
- Biotechnology
- Environmental Studies
- Food and Nutrition
- Data Science
- Analytical and Testing Sciences
- Physical Sciences

STUDY AREA

- Biochemistry
- Biology
- Cell and Molecular Biology
- Environmental Science
- Food and Nutritional Sciences
- Molecular Biotechnology
- Risk Management Science
- Statistics
- Chemistry
- Earth System Science
- Mathematics
- Physics

Curriculum



University Core (39 units)
 Include Chinese, English, General Education, Information Technology and Physical Education courses

Major (51 – 72 units)
 Include Faculty Package (9 units), Major Required and Major Elective courses

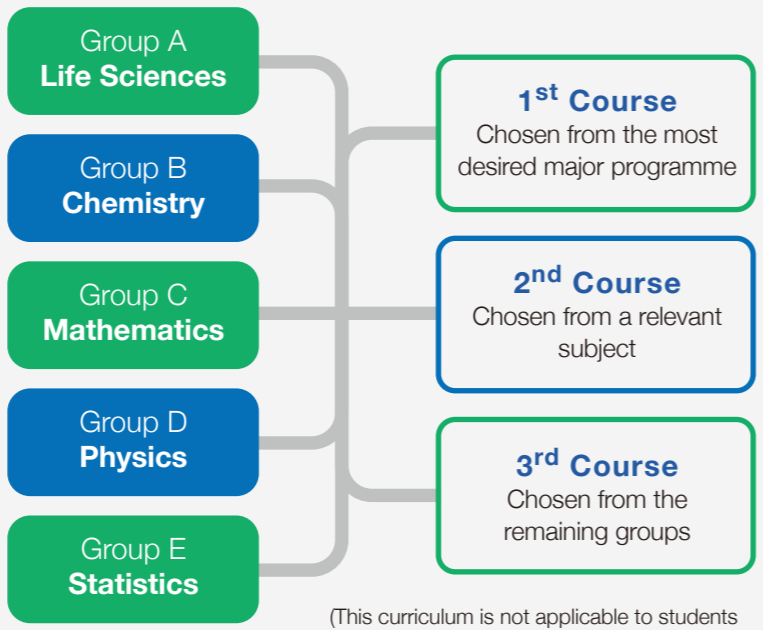
Minor or Second Major (Optional)
 May select one or two Minor programme(s) or even take a Second Major

Free Elective (Remaining units)
 Select freely among courses offered by different programmes

Minimum **123** units

FACULTY PACKAGE COURSES

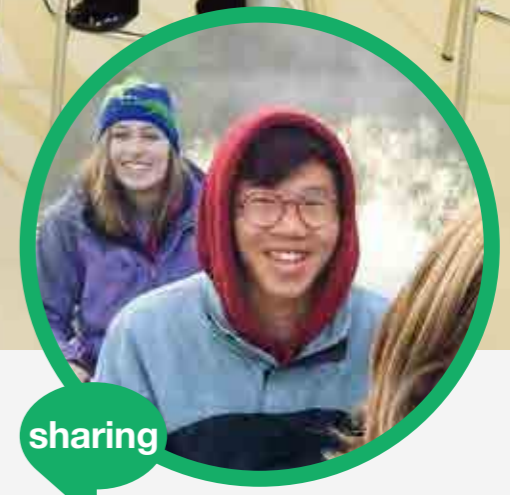
The Faculty Package (FP) consists of building blocks for the foundational study of science in the first year. It is designed to fit students with different science backgrounds. The package contains five groups of courses. Students should take 3 courses from at least 3 different groups according to their interest, ability and the specific requirements of their preferred majors.



(This curriculum is not applicable to students studying the B.Sc. in Natural Sciences)

ACADEMIC ADVISORY SYSTEM

Every student is assigned an Academic Advisor, who provides academic and general advice on issues such as course selection, guided study and adaptation to University learning mode. The advisor also becomes a resource person and provides information on whole-person development opportunities to students or refers students to suitable units, if necessary.



sharing

Chandler Tsang (Biology)

“CUHK provides great variety of programmes and courses for students to choose from, ranging from natural-science-based to molecular and biotechnology-based courses. For my case, I am a Biology student minoring in Environmental Science because I believe it is better to study organisms with knowledge on the always-changing environment where they inhabit in. I am also taking some molecular-based courses to enrich my knowledge in the ever-growing field of molecular biology.”

Science, Technology And Research Stream (STARS)

Undergraduate research has been an integral part of our curriculum, and the Faculty of 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.



“STARS offers me opportunities to join different laboratory experiments and attend seminars on various topics to realize my interest in research. During my exchange at UC Berkeley in the US, I extended my research interest by taking lots of intriguing courses and seminars and later recognized my passion on neurodegeneration. Inspired by this interactive learning environment, I become more confident to speak up in classes and the experience has motivated me to be a more competent learner.”

Leung King To
(Cell and Molecular Biology)



www.sci.cuhk.edu.hk/stars

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 being admitted to the Faculty of Science (via SCIENCE broad-based admission or programme-based admission) majoring in Biochemistry, Biology, Cell and Molecular Biology, Chemistry, Earth System Science, Environmental Science, Food and Nutritional Sciences, Mathematics, Molecular Biotechnology, Physics, and Statistics meeting the criteria in Phase 1 or Phase 2 are eligible to enrol.

Be one of the STARS !



Phase 1

Newly Admitted Students

HKDSE Best 5 Score

31 out of 35;

or

29 out of 35 with one **5**** in Biology, Chemistry, M1, M2 or Physics

Non-JUPAS

Outstanding academic results upon admission

Phase 2

Year 1 Students

with **Excellent** academic performance in their First year of studies in the Faculty of Science

“With economic support from STARS, I carried an individual research project on synthesizing azetidine modified peptide at University of Warwick in the UK. After learning how to work out a research project and experiencing the ups and downs, I become more confident in developing and executing the experiments on my own. More importantly, the study abroad experience has boosted my confidence to pursue further studies in the future.”

Cheung Tsz Lam (Chemistry)

Experiential Learning

Our undergraduate curriculum aims at training all-rounded students who move on to be tactful contributors in all areas. 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-rounded individuals.

In addition to our rigorous curriculum including lectures, tutorials 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:



Internships



Research Opportunities



Student Exchanges

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.

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, such as iGEM, to attest their scientific finesse.

Examples of Undergraduate Research Programmes



COSINE



DREAM



OPUS



SURE

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.



Over 600
global internship opportunities for CUHK students every year



sharing

Samuel Chiu
(Quantitative Finance and Risk Management Science)

Institute: Ernst & Young
I joined the Credit Risk team in my sophomore-year internship and mainly worked with my team in building Excel-based solutions for the newly implemented HKFRS9 credit impairment standard. I also worked closely with different functions of a local bank to implement the features of report-generating tools. Throughout the internship, I gained valuable insight of how commercial banks measure and report their credit risk exposure and how data are managed and transformed into useful statistics for financial reporting in credit risk. I also honed my Excel and VBA skills through the intensive use of Excel in different tasks. My managers and seniors were very supportive and gave me valuable feedback to improve my work and delivery.



sharing

Chua Li Cong (Cell and Molecular Biology)

Institute: Chonnam National University, Yeosu, South Korea
During my research internship in South Korea, I have acquired knowledge and skills in plant cultivation and gained hands-on experience in managing cultivation fields. The annual laboratory meeting which gathers laboratory members, associates, and collaborators from local and overseas universities offered me the chance to interact with scientists so as to further improve my research project. Together with the technical skills and logical reasoning ability, the essence of scientific research that I have acquired in the intensive laboratory training and one-on-one capstone courses offered by CUHK, all in fact have taught me how to independently perform scientific investigation and prepared me for my Ph.D. study in Singapore. Though most people in Yeosu do not know how to speak English, my laboratory members were always happy to translate for me and show me around to experience the Korean culture. And I also made new friends with students from Korea and Japan. In short, if you are looking for a research-oriented programme to help you realize your dream as a scientific researcher, then this is the right programme.



sharing

Chen Yiyao
(Mathematics)

Institute: Joint Institute for Computational Sciences, Oak Ridge National Laboratory & University of Tennessee, Knoxville (UTK), USA
Programme: COSINE
Spending ten weeks at UTK has changed me a lot and given me an invaluable research experience. The academic atmosphere in USA impressed me most as people are willing to offer help. I worked with an American girl on analyzing the EEG signals, a recording of the brain's electrical activity, and consulted with other teams who were working on topics about computer science or biological engineering to support our project. I enjoyed experiencing the life of research, finding out problems, and solving them through new research skills I have learnt, like dissecting a problem from multiple perspectives. The whole cycle inspired me to pursue my Ph.D. study in the future. The programme also offered me the chance to experience living in a society with different culture, which also changed some of my thoughts and impressions towards USA.

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 the access to a multitude of exchange programmes, and can spend a summer, a semester, or even a full academic year 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 desire.

Offer over **280** student exchange programmes

Global partnerships in **40** countries/regions

The University has formal partnerships with over **460** institutions around the world

For complete and update information, please refer to the Office of Academic Links website



www.oal.cuhk.edu.hk/destinations/

Examples of exchange partners:

Brown University

Cambridge University

Cornell University

Peking University

University of California, Berkeley

University of California, Los Angeles

Kyoto University

McGill University

Nanyang Technological University

National University of Singapore

University of Illinois at Urbana-Champaign

The University of Melbourne

University of Michigan

University of Warwick



sharing

Koo Chung Tin (Risk Management Science)

Institute: McGill University, Montreal, Canada

My wonderful exchange experience started with the orientation brunch and walking tour in Downtown Montreal organized by the McGill University. After making new friends from all around the world and getting familiar with the campus environment, semester began. The teaching mode in McGill was quite different from that in CUHK; professors in McGill would not upload class handouts online but wrote on the blackboard instead for our copying, which greatly encouraged students to attend classes. Courses offered by the university are inspiring. I took a mathematical finance course and learnt some basic concepts, as well as various advanced mathematical models of pricing; all of them framed the foundation for my future study. In this once-in-a-lifetime experience, I tried lots of new things. I mastered cooking skills step by step, from cooking simple dishes to advanced cuisine, and have eventually developed a new hobby; I learnt how to deal with contingencies and make good decisions when I was travelling to a new place where difficulties emerged such as cancellation of flights. All the great experience has influenced me to consider pursuing further study overseas in the future.



sharing

Gabriel Fan (Earth System Science)

Institute: The University Centre in Svalbard (UNIS), Norway

I was on an exchange to the Svalbard Islands, the Norwegian Arctic for five months in 2016. I got the chance to go on field trips on glaciers and a scientific cruise to the Arctic Ocean in the Arctic Marine Geology course. Apart from collecting ocean sediment samples, I experienced drawing geomorphological charts and having laboratory work on the ocean bed cores. Another course on Glacial Geology was also an entirely new subject to me. With the generous help from my classmates and teachers and by trial and error, I was able to solve the problems that I encountered during the analysis of results collected in a series of tough field work and field measurements. Meeting new friends from America, Finland, and Sweden was a great experience and having the chance to study and work in the Arctic was a truly irreplaceable exposure. All were just unimaginable.



Admissions

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

- SCIENCE Broad-based Admission
- Programme-based Admission

SCIENCE Broad-based Admission Scheme

The broad-based admission scheme allows students during their first year of study to explore their interests in the following 11 science programmes.

The grid contains the following programmes:

- Biochemistry
- Biology
- Cell and Molecular Biology
- Chemistry
- Earth System Science
- Environmental Science
- Food and Nutritional Sciences
- Mathematics
- Molecular Biotechnology
- Physics
- Statistics

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 majors at the time of entrance, or at the end of Year 1 or Year 2.

“.....
The Broad-based Admission Scheme allows me to get opportunity to specialize in a field and explore new horizons. This is particularly valuable to freshmen and senior-year students as they are developing their interests and finding their fields. For me, in addition to the required courses in biochemistry, I could take electives in subjects as diverse as animal physiology and bioethics.

”
Serene Yue (Biochemistry)

Major Declaration

Students can declare their major at any of the three time points with admission guaranteed.

Phase I

(Entry)

Obtained Level 5 or above in a HKDSE subject specified by the potential major programme

Phase II

(End of Year 1)

Obtained C+ or above in ONE course from the Faculty Package specified by the potential major programme

Phase III

(End of Year 2)

Taken a set of courses specified by the potential major programme

For students admitted via Non-JUPAS scheme, please refer to the Science Faculty website.

Admission Scholarships

Faculty and major programmes offer admission scholarships to both local and non-local new undergraduate students on basis of their outstanding academic performance.

University and Colleges also offer various scholarships and financial aid.

For further details, please refer to the website of Office of Admissions and Financial Aid (admission.cuhk.edu.hk) and Dean of Student's Offices of Colleges.

Joint University Programmes Admissions System (JUPAS)

Local students with Hong Kong Diploma of Secondary Education (HKDSE) results can apply through the JUPAS scheme. Applications should be submitted online through the JUPAS office website (www.jupas.edu.hk).

SCIENCE Broad-based Admission	JUPAS Code
Biochemistry	JS4601
Biology	
Cell and Molecular Biology	
Chemistry	
Earth System Science	
Environmental Science	
Food and Nutritional Sciences	
Mathematics	
Molecular Biotechnology	
Physics	
Statistics	

Programme-based Admission	JUPAS Code
Earth System Science (Atmospheric Science / Geophysics)	JS4633
Enrichment Mathematics	JS4682
Natural Sciences *	Non-JUPAS
Enrichment Stream in Theoretical Physics	JS4690
Quantitative Finance and Risk Management Science #	JS4276
Risk Management Science	JS4719

* A 2-year programme for articulation of local Associate Degree / Higher Diploma Holders

Jointly offered with the Faculty of Business Administration (Interdisciplinary Major Programme)

Applicants are required to fulfill both the University minimum requirements and programme-specific minimum requirements. For complete and update information, please refer to the JUPAS website and the Office of Admissions and Financial Aid website (admission.cuhk.edu.hk).

Non-JUPAS

Students fall into the following categories are considered as non-JUPAS applicants:

- **International students**
(require student visas)
- **Local students**
(apply on the strength of qualifications other than HKDSE)
- **Mainland students**
(current Gao Kao candidates)

Students with qualifications such as (but are not limited to) GCE A-Levels, IB Diploma, Associate Degree, Higher Diploma, Hong Kong Advanced Level (HKAL), high school diploma plus SAT, Gao Kao in China, UEC/STPM in Malaysia, ATAR in Australia, OSSD in Canada, GSAT in Taiwan or any other equivalent, are eligible to apply for admission.

Non-JUPAS applications are considered on a case-by-case basis, taking into account of individual merits. Non-JUPAS Local and International students should submit their applications directly to the University's Office of Admissions and Financial Aid (OAFI). Current Mainland Gao Kao candidates should apply through the National Colleges and Universities Enrolment System.

For more information about all entrance requirements (including language requirements), please refer to the Office of Admissions and Financial Aid website (admission.cuhk.edu.hk).




Enquiries




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SCIENCE

 (852) 3943 6327
 sfo@cuhk.edu.hk
 Room 30, G/F, Charles Kuen Kao Building, Science Centre, CUHK

JS4633
Earth System Science
(Atmospheric Science /
Geophysics)

 (852) 3943 9624
 essc@cuhk.edu.hk
 Room 303, 3/F, Mong Man Wai Building, CUHK




JS4682
Enrichment Mathematics

 (852) 3943 7988
 dept@math.cuhk.edu.hk
 Room 220, 2/F, Lady Shaw Building, CUHK




JS4690
Enrichment Stream in
Theoretical Physics

 (852) 3943 6154
 physics@cuhk.edu.hk
 Room 108, 1/F, Charles Kuen Kao Building, Science Centre, CUHK


JS4276
Quantitative Finance and
Risk Management Science

 (852) 3943 0461
 qfrm@cuhk.edu.hk
 Room 119, 1/F, Lady Shaw Building, CUHK

JS4719
Risk Management Science

 (852) 3943 7931
 statdept@cuhk.edu.hk
 Room 119, 1/F, Lady Shaw Building, CUHK

Natural Sciences
(Non-JUPAS)

 (852) 3943 3542
 nsci@cuhk.edu.hk
 Room 333A, 3/F, Charles Kuen Kao Building, Science Centre, CUHK



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