香港中文大學
THE CHINESE UNIVERSITY OF HONG KONG

Faculty of Science 理學院

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Dean's Message

Science education is the key to technological innovations, which not only fuel economic growth in modern society, but also benefit humanity in our daily lives. Since coming into existence in 1963, the Faculty of Science at The Chinese University of Hong Kong (CUHK) has taken pride in providing an ideal environment for active scientific learning and research. With two Schools (Chinese Medicine and Life Sciences) and four Departments (Chemistry, Mathematics, Physics, and Statistics), the Faculty offers 14 undergraduate programmes and 32 postgraduate programmes. A third of the 2,600 students at the Faculty are working towards their graduate degree. Our teaching curricula value a liberal arts science education for our students, while emphasizing their development of independent and critical thinking, problem-solving skills, and creativity.

Over the past several decades, the Faculty of Science has been building up to be a world-class Faculty aiming to lead scientific innovations across a wide range of disciplines. Our impressive list of faculty members and distinguished alumni attests to the fine level of research as well as teaching and learning at our Faculty. Between 2007 and 2009, our faculty members secured over HK$186 million of competitive external funding for research, with the aim of expanding the frontier of human knowledge.

The Faculty of Science is not only engaged in a relentless strive for education and research excellent on the CUHK campus; we are active leaders of teaching and learning development projects to enhance the training of Hong Kong citizens and support the education reform in secondary schools. As the University marches forward, our Faculty is determined to stay in the forefront of scientific education and pursuits. Realizing that truly novel results in higher education and academic research require great efforts and can only be achieved by inspired and passionate students and faculty members, we seek to provide a fun, stimulating, and inspiring environment for our students and teachers to fulfill their scientific aspirations.

院長的話

中文大學理學院肩負著為各老師、同學和研究人員提供一個理想的科學教學及研究環境的重任。理學院由兩個學院(中醫學院及生命科學學院)和四個學系 (化學系、數學系、物理系及統計學系) 組成，並提供 14 個本科生課程以及 32 個研究生課程。理學院現有超過 2,600 個學生，而三分一的學生正修讀研究生課程。理學院希望學生除了接受一個着重人文價值的科學教育，也能從中磨練他們的獨立及批判性思考、解決問題的技巧和創意。

經過數十年的努力，理學院已成為一個綜合眾多科學的國際級學院。理學院的優秀教研隊伍和專業而出色的畢業生，都能證明理學院是教、學、研三方兼備。2007 年至 2009 年間，我們的教師透過獲得競爭所取得的資金，超過 1.86 億港元，以作研究之用，其目的旨在開創人類知識的新領域。

理學院不僅在中文大學內全力以赴，把教育和研究兩個範疇做到最好；我們也是積極推廣科學教育和推行學習發展項目的先驅，以提高香港市民的培訓和支持中學教育改革。大學的步伐不斷向前，理學院將會繼續留守在科學教育和科研發展的最前線。要實現高等教育的成果和學術研究需要很大努力，更必須有既熱情又富有靈感的師生協助，才能成功。我們致力提供一個有趣、能刺激思維和鼓勵學習的環境予我們的學生和教師，讓他們能實現自己在科學的抱負。

Ng Cheuk-yiu 伍灼耀
Dean of Science, CUHK
理學院院長

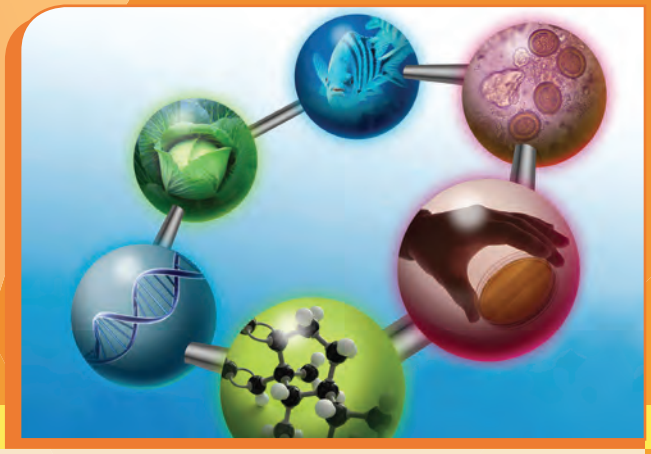
Programme Overview

課程概況

Overview 概況

Degree offered 課程提供	Undergraduate Programmes 本科生	Postgraduate Programmes 研究生		
		Research 研究式		Taught Master 授課式
		Doctoral 博士	Master 碩士	
Chemistry 化學	√	√	√	
Chinese Medicine 中醫學	√	√	√	Master of Chinese Medicine 中醫學碩士 MSc in Acupuncture 針灸學理學碩士 MSc in Chinese Medicine 中醫學理學碩士 MSc in Chinese Medicines & Herbal Drugs 中藥及草藥學理學碩士
Double Degree Programme in Mathematics and Information Engineering 數學與信息工程學	√			
Interdisciplinary Major Programme in Quantitative Finance and Risk Management Science 計量金融學及風險管理科學跨學科主修課程	√			
Materials Science and Engineering 材料科學與工程學		√	√	
Mathematics 數學	√	√	√	MSc in Mathematics 數學理學碩士
Physics 物理	√	√	√	MSc in Physics 物理理學碩士
Risk Management Science 風險管理科學	√		√	MSc in Risk Management Science 風險管理科學理學碩士
Statistics 統計學	√	√	√	MSc in Data Science and Business Statistics 數據科學及商業統計理學碩士
Life Sciences 生命科學				
Biochemistry 生物化學	√	√	√	MSc in Biochemical and Biomedical Sciences 生物化學及生物醫學理學碩士
Biology 生物學	√	√	√	
Cell and Molecular Biology 細胞及分子生物學	√			
Environmental Science 環境科學	√	√	√	
Food and Nutritional Sciences 食品及營養科學	√		√	MSc in Nutrition, Food Science & Technology 食品及營養科學碩士
Molecular Biotechnology 分子生物技術學	√	√	√	

Life Sciences



The Faculty has launched a flexible Broad-based Admissions Scheme for School of Life Sciences in 2009/10 academic year. The scheme allows students to explore their interests in all six Life Sciences programmes offered by the School during their first year of study before declaring their major study programme. The six participating Life Sciences Programmes include Biochemistry, Biology, Cell and Molecular Biology, Environmental Science, Food and Nutritional Sciences and Molecular Biotechnology.

生命科學

理學院於零九至一零年學年起推出生命科學學院統一招生計劃，使學生選科更具彈性。新計劃讓學生在確定主修課程前，有更多機會了解自己在各個生命科學學科的興趣和能力，從而作出最正確的選擇。生命科學學院包括六個主修課程，分別為生物化學、生物學、細胞及分子生物學、環境科學、食品及營養科學以及分子生物技術學。

Admissions Coordinator 入學聯絡人

Professor K B Wong
黃錦波教授

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Biochemistry

Biochemistry is a branch of science that studies, at the molecular level, chemical compounds and processes which occur in living organisms. The curriculum encompasses the study of metabolism of biomolecules and its regulations, life processes, molecular biology, enzymes and proteins, cancer development, clinical biochemistry, endocrinology, immunology and neurosciences. There are also opportunities of internship and research. The curriculum is designed to enhance research and experiment skills of students. Students can also take part in summer research programme. The knowledge procured from research in these areas has found extensive applications in medicine, biotechnology industry, and in our daily lives.

Career Prospects

In the past few years, about half of Biochemistry graduates chose further studies and about one-third entered the business sector. There are also alumni working in Government and hospital laboratories as well as in the teaching profession.

生物化學是一門在分子層面上研究和揭示生命現象的科學。課程範圍廣泛，內容包括生物分子代謝及調控、生命程序、分子生物學、蛋白質與酶、腫瘤學、臨床生物化學、內分泌學、免疫學及神經科學。所有課程連同實驗課，以加強同學研究和實驗技巧之訓練。同學亦可參與暑期研究，並可在畢業前選擇專題實驗研究。這些研究所累積的知識，已廣泛應用於醫學、生物科技、工業和日常生活之中。

就業前景

在過去幾年間，大約有一半的生物化學畢業生選擇繼續進修，另外有三份一畢業生於商業機構工作。亦有部份舊生於政府部門或醫院化驗室工作，更有些成了教書老師。

Biology

Biology is the main engine driving the future economic and social developments in the 21st Century. The mission of the programme is to generate and transfer knowledge, cultivate future star scientists, and train all-round citizens for our society. The programme places emphasis on both research and education. The programme has received major funding support from the University Grants Committee and is recognized as the Area of Excellence (AoE) on Plant and Fungal Biotechnology. In collaboration with major national and international scientific institutes, this AoE centre tackles major agricultural and health problems using state-of-the-art technologies. Through the AoE centre, the programme also participates in the China national programme of rice functional genomics and is responsible for the part of seed quality.

At the University level, the Marine Biotechnology research programme is also recognized as one of the strategic research areas of CUHK. The Simon F S Li Marine Science Laboratory is equipped with full-fledged research and teaching laboratories. Current research is focused on the physiology, biochemistry and molecular biology of marine animals, especially that of fish and shrimps, in relation to fisheries and mariculture and the biology and ecology of planktonic and coral reef organisms.

Career Prospects

The comprehensive curriculum and training encompass both fundamental and advanced fields of the BioSciences so that Biology graduates could develop their career in various aspects.

- Teachers, principals, professors and vice-chancellor in the education sector local and abroad. Others are working as research, technical, or administrative staff in tertiary institutions.
- Research, technical and administrative staff in the government, e.g. AFCD, EDB, EPD, DH, FEHD, and business sectors, e.g. pharmaceutical, biotech, commerce & health care industries.

生物

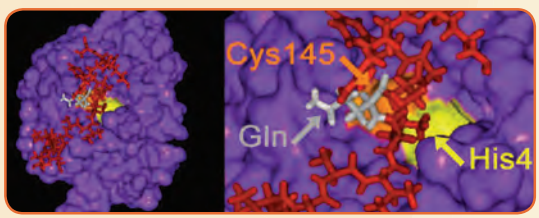
生物是廿一世紀經濟及社會發展的主要動力。課程的使命是為社會創造及傳授知識，培育明日科學之星，以及訓練全才的公民。課程以科研及教育並重。在科研方面，生物課程之「植物及真菌生物科技」科研計畫獲香港大學教育資助委員會確認為卓越學科領域，給予重點資助。應用嶄新科技，並通過與國內外科研機構合作，這個科研計劃對農業及健康課題進行重點攻關，其中稻米品質的研究獲邀參與國家水稻功能基因組國家重大科研項目。

海洋生物科技亦被確認為中大策略性研究項目，李福善海洋科學研究中心有設備完善的教學及研究實驗室，研究重點包括:經濟魚、蝦類之生理、生化及分子生物學，以及浮游生物和珊瑚礁的生態等。

就業前景

生物課程提供全面培訓，讓畢業生能有良好生物科學基礎的同時，汲取深入的生物科學知識，好讓畢業生在畢業後能作多方面發展。

- 在海外及本地，均有生物課程之畢業生投身於教育界，成為教師、中學校長、教授和大學校長等。有一些畢業生亦於高等教育學院中擔任研究員、技術人員或行政人員。
- 在政府機構如教育署、環保署、衛生署等；以及在商業界別如藥劑、生物工程、商業與健康等行業當中，擔任研究員、技術人員或行政人員等職務。



Cell and Molecular Biology

As one of the major internationalized cities of China, Hong Kong is quickly becoming a national and international research centre for biomedical sciences at an unprecedented pace. To cope with the increasing demand for talents in the field, the Chinese University of Hong Kong launched the Cell and Molecular Biology Programme (CMBI) in 2008 with the aim to prepare its students for a professional research career in the fields of biological and biomedical sciences through an innovative curriculum.

CMBI is a research-intensive programme focusing on the fundamental aspects of cell and molecular biology. Its major research directions include cell structure and function, cell signaling, molecular biology, developmental biology, stem cell biology, and neurobiology. Various well-recognized cell systems such as stem cells and top model organisms such as Drosophila and mouse are used to exemplify the basic principles and questions in these fields.

Career Prospects

The establishment of CMBI is to sculpt and to supply outstanding personnel to the fields of life sciences. Solid knowledge and appropriate training in the field enable our highly competitive CMBI graduates to pursue research careers in a wide range of disciplines in life sciences and medicine as well as biotechnological and pharmaceutical industries. Further advanced studies in graduate schools or other professional schools as well as footprints in the laboratories of academic institutions, hospitals, government and other biomedical-related companies are highly conceivable. With the innovative curriculum, CMBI graduates are also expected to possess all-round competence in IT technology, information gathering and synthesis, critical thinking, efficient oral and written communication, and teamwork spirit. These capabilities will ensure that our graduates are not limited to research careers but indeed, their career prospects go beyond the field of cell and molecular biology. Alternative academic or non-academic career paths after graduation such as teaching, business management, and government are exceedingly attainable.

細胞及分子生物學

作為中國其中一個主要的國際城市，香港正快速地成為國家及國際生物醫學研究中心。為配合此研究領域與日俱增的人才需要，香港中文大學於 2008 年創辦了細胞及分子生物學課程。透過獨特和全面的課程設計，中大細胞及分子生物學課程的畢業生將具備投身生物及生物醫學研究的專業知識和訓練。

本課程是一個以探討細胞及分子生物學基本規律為宗旨的研究型教學課程，其研究範圍包括細胞結構及功能、細胞信號傳導、分子生物學、發育生物學、幹細胞生物學及神經細胞生物學等。本課程的研究項目主要採用各種細胞系統（如幹細胞）及重要的模式生物（如果蠅和小鼠），以闡述細胞及分子生物學領域的基礎核心原理及相關問題。

就業前景

細胞及分子生物學的成立，是為了替生命科學範疇打造及提供出色人才。擁有穩固的業內知識和充份的訓練，細胞及分子生物學的畢業生能在生命科學、醫學、生物科技及藥劑等研究領域當中保持競爭力。有部份畢業生則在研究院或其他專業學業繼續進修；亦有部份在學院的實驗室、醫院、政府部門及一些生物醫學相關的行業就職。細胞及分子生物學課程內容創新而實用，畢業生裝備全面技能：資訊技術、搜集及整理資料、批判思考、良好的書寫溝通能力及會話傳意能力，以及團隊精神。擁有這些技能的畢業生不會只局限於從事研究專業，更能於細胞及分子生物學以外的專業發揮一技之長，包括在教育、商業管理及政府機構等學術及非學術專業，都能有無限的發展空間。

Environmental Science

Environmental Science is an integrated science that involves the use of the knowledge and skills of applied biochemistry, biology, and chemistry to test, assess, and resolve environmental problems. The basic courses of the programme cover the fundamentals of biochemistry, biology, and chemistry. Subjects including environmental pollution and toxicology, environmental instrumentation techniques, and environmental impact assessment, and principles of environmental management and pollution control are provided to nurture all-round interest of students in environmental science. The curriculum prepares students for further studies and careers in environmental chemistry and instrumentation techniques, environmental impact assessment, pollution monitoring, toxicology and environmental conservation in government and private sectors. Students can also choose to conduct supervised research on a special area of their choice in environmental science. This will strengthen their knowledge in environmental science and their ability to write research reports. Graduates are prepared for jobs related to environmental science as well as postgraduate studies. The programme also offers M.Phil. and Ph.D. degrees, in which students can undertake projects for more in-depth study and research.

Career Prospects

The curriculum of this programme is designed with a view to provide specialized training with strong emphasis on environmental chemistry, biodiversity and conservation biology, toxicology, pollution control and management, environmental health and environmental impact assessment. Environmental Science programme prepare their graduates with a high level of competence in scientific understanding of various environmental issues and a proper handling of the appropriate techniques in addressing these issues. The graduates are well prepared for employment in relevant government departments, commercial and industrial enterprises, environmental consultancies, environmentally-concerned NGOs, as well as for further studies in different environmental science disciplines from environmental chemistry to toxicology, bioremediation, and wildlife conservation.

環境科學是一門綜合性科學，內容主要涉及應用生物化學、生物學及化學的知識及技能，來理解、測量、評估及改善各種環境問題。本課程的基礎科目包括環境科學所需的生物化學、生物學及化學基本知識。此外，本課程亦提供環境化學及儀器分析技術、環境影響評估、污染監測、毒理學和環境保育等課題，以增進同學們對環境科學各方面的認識，進而在專門項目上，例如毒理學、環境保育、資源運用及廢物處理等，作更深入的鑽研。畢業前，學生亦可以在導師指導下，選擇進行環境科學各專題的研究，以加強他們在環境科學研究上的經驗和發表科研報告的能力。本學科亦設有碩士及博士研究課程，可對環境科學個別項目進行更專業的探討及研究。

就業前景

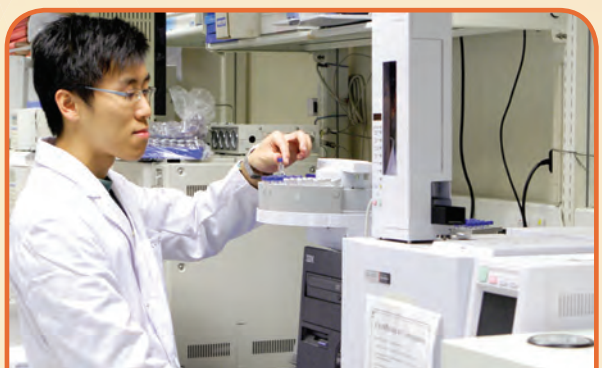
環境科學課程為學生提供專業訓練，加強以下範疇的培訓：環境化學、生物多樣性及生物保育、毒物學、污染控制及管理、環境健康以及環境影響評估。環境科學的畢業生能以其專業科學知識去理解及處理環境相關的問題。畢業生能從事相關的政府部門、商業及工業企業、環境顧問以及環保團體等；有部份則會繼續升學，進修不同範疇的環境科學知識，由環境化學到毒物學；由生物復育到野生生物保育等。

Food and Nutritional Sciences

The curriculum covers food and nutrition, food safety, food microbiology, food preservation, food product development, food analysis, quality assurance etc. The two integrated parts of the programme, food science and nutritional science, systematically familiarise students with professional and practical knowledge of both fields. Along with introductory food and nutritional science courses, students first take fundamental courses on human physiology, genetics, microbiology, cellular basis of biochemistry, and fundamentals of biochemistry, etc., to prepare for the more in-depth study of food and nutritional sciences. They can then choose from a range of specialised food and nutritional sciences courses and conduct directed research on a relevant topic under the supervision of a lecturing staff.

Career Prospects

With the emerging awareness of food safety and nutritional problems in our society, the demand for the expertise and manpower in these areas is increasing. Employment opportunities for our graduates are excellent. These include personnel in quality assurance, production, research and development in the food industry; scientific officers, dietitians, health inspectors and technicians in the HKSAR Government; academia and teachers in University and educational sector; and nutritionists and consultants in the healthcare business.



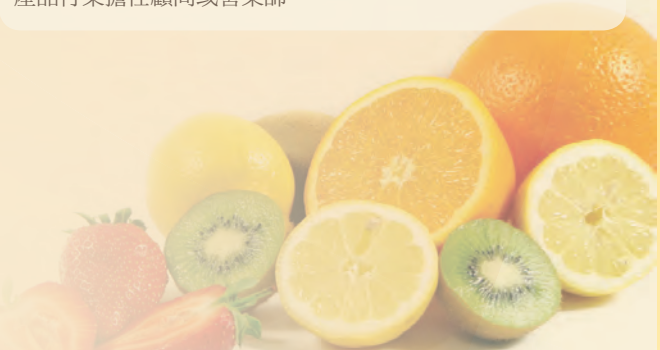
食物及營養科學

課程研讀範圍廣泛，包括食品與人類營養及健康之關係、食品安全，食品微生物學、食品保存、研發、成份分析及品質管理等。

本課程之內容可概分為食品科學及營養學兩部分，由淺入深，循序漸進地向學生介紹食品科學和營養學的專業知識和實驗技術。學生先修讀食品及營養的導論科目及基礎科目如人體生理學、遺傳學、微生物學、生物化學細胞學、生物化學等課程，以增強修讀食品科學及營養學專修科的能力及興趣；其後，學生選讀與食品科學及營養學有關之專門科目，及可在老師指導下進行有關之「專題研究」，以進一步加強對食品科學及營養學的專業知識。

就業前景

社會日漸關注食物安全及食物營養等話題，對這方面的專業人士及人力要求日漸增多，所以本課程的畢業生有很好的就業機會。當中包括在食品行業當中擔任食品品質管理、生產、研究及發展的人員；在政府部門擔任科技人員、營養師及健康監察員；在教育機構擔任教職員或教授；以及在保健產品行業擔任顧問或營業師。



Molecular Biotechnology

Molecular biotechnology is a modern inter-disciplinary field with widespread applications and significant contributions in industry, agriculture, environment, and medicine. The Molecular Biotechnology Programme is offered jointly by the Departments of Biochemistry and Biology to meet the great demands for biotechnology expertise.

Molecular Biotechnology Programme provides an integrative training to students. Students first acquire basic knowledge in biology, organic chemistry, biochemistry, cellular biology, and genetics, and gain hands-on experience and basic skills through laboratory classes. MBTE students are expected to acquire the fundamentals of molecules, genetics, cells, and organisms. The Programme focuses on the core of molecular biotechnology in the upper years with specialised courses covering methods in biochemistry, molecular biology and genetic engineering, microbial biotechnology, plant biotechnology, animal biotechnology, protein biochemistry, proteomics, and bioinformatics. Molecular biotechnology is a rapidly developing technical- and application-oriented area. The programme offers the course *Methods in Molecular Biotechnology* to equip the students with the latest methodology and technology.

Career Prospects

Molecular Biotechnology graduates have a broad spectrum of career prospects in both public and private sectors. More than 50% of the MBTE graduates pursue further studies locally and abroad, including doctoral studies in renowned institutions. As the application of biotechnologies continues to advance, the demand in this area of expertise and the demand of manpower are increasing.

分子生物技術學

分子生物技術學是現代先進綜合學科，在工業、農業、環境、醫療及藥物各方面，均有突破性的貢獻及廣泛的應用。本課程由生物化學系及生物學系聯合提供，為社會對分子生物技術的需求，培養專業人才。

分子生物技術學是一門綜合科學。首先提供各門生物學、有機化學、生物化學、細胞學及遺傳學等科目及實驗，讓同學建立從分子、遺傳、細胞，以至生物個體層面上的基礎知識，增強能力及興趣。在高年班時，同學則專注生物技術學；可選修生物化學方法、分子生物學與遺傳工程、微生物、植物及動物生物技術學等專門科目。由於生物技術學是一門技術性強，應用性高，及發展迅速的學科，故課程設立一門「分子生物技術學方法」，使同學熟習嶄新的方法、技術及儀器。

就業前景

超過百分之五十的分子生物技術學畢業生繼續在本地或海外升學，當中包括在一些享負盛名的院校修讀博士課程。正因為生物技術的應用科技越來越先進，對這個專業的人力及專業需求亦日益增加。

Chemistry

Chemistry is a central science with physics, mathematics and earth science on one side and the life sciences and medicine on the other. Traditionally, chemistry encompasses five major areas: analytical chemistry, inorganic chemistry, organic chemistry, physical chemistry and theoretical chemistry. The integration of two or more of these components gives rise to more specialised fields in chemistry, such as Bioinorganic Chemistry, Organometallic Chemistry and Polymer Chemistry.

The Chemistry Major programme provides a basic training in modern chemistry. It is meticulously organised to give equal emphasis to theory and application. Students are given ample training in logical thinking. The first two years of the programme are devoted to basic training in all disciplines of modern chemistry. Final year students may choose to carry out a research project under the supervision of an advisor. The research experience may cultivate independent thinking and critical judgement and prepare them for further studies in chemistry.

Career Prospects

The career of Chemistry graduate is highly diversified. Besides continuing to pursue higher degrees in chemistry or related disciplines, some of the graduates are engaged in chemistry-related careers such as environmental monitoring, forensic science and quality assurance in government or private laboratories while some serve in primary or secondary schools. Some may choose to develop their careers in commerce and industry sectors based on their sound training in analytical perception and technical knowledge. Many of the Chemistry alumni are now taking prominent positions in different sectors, including but not limited to the following:

- ~ 13 Secondary school principles
- ~ 65 Professors/lecturers in local and overseas tertiary institutions
- ~ 20 Chemists in the Government Laboratory

化學是一門「中心科學」，在它的一邊有物理、數學和地球科學，而另一邊則是生命科學和醫學。傳統上化學分為五個主要部份：分析化學、無機化學、有機化學、物理化學和理論化學。各範疇相互配合又可產生更專門的學科，如生物無機化學、金屬有機化學及高分子化學等等。

化學主修課程組織嚴謹、理論及實驗並重、強調邏輯思維、旨在提供完整的現代化學基本訓練。課程不僅於第一、二學年為學生在各個現代化學範疇上提供全面的教導，畢業班學生更可以根據個人興趣，選擇各種進階及專題科目，並參與專題討論，以增加對當今主流化學的理解，他們亦可以在老師指導下進行一項研究計劃，撰寫學士論文，以培養獨立思考和判斷能力，為攻讀高等學位打下穩固的基礎。

就業前景

化學系的畢業生能有多樣化的就業出路。部份畢業生除了繼續在化學或其相關專業進修外，還有些在化學相關的行業工作，例如：環境監察、科學鑑證以及在政府或私人實驗室當中負責品質監控，亦有些在中小學裏工作。有些畢業生投身商業及工廠界，希望一展所長。有很多化學系的舊生都在不同的工作界別擔任要職，包括：

- ~ 13 位中學校長
- ~ 65 位教授或講師在本地或海外高等學府任教
- ~ 20 名於政府化驗室工作的化驗師

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Chinese Medicine

This programme is offered by the School of Chinese Medicine and lectures are co-teach by professors from Faculties of Science and Medicine. Its aim is to produce practitioners of Chinese medicine who are grounded in life sciences and medical knowledge and are also well-versed in the theory and practice of Chinese medicine. Students are expected to integrate modern medical knowledge with traditional Chinese medicine approaches.

The five-year programme consists of pre-clinical study and clinical training. Pre-clinical study includes subjects in basic medical and life sciences, principles of Chinese medicines application, Chinese medical concepts and theories, Chinese medicine classics, various specialties in Chinese medicine (such as internal medicine, gynaecology, paediatrics, orthopaedics, acupuncture etc) and other courses.

During the second part of the programme, students attend Chinese Medicine out-patient clinics in Hong Kong and/or the mainland. In the first nine months of the clinical programme, classes and bedside teaching are held at Chinese Medicine hospitals on the mainland and cover the various aforementioned specialties.

Upon satisfactory completion of the programme, a Bachelor of Chinese Medicine degree will be conferred, and the graduates will be qualified to take the Chinese Medicine Practitioners Licensing Examination conducted by the Chinese Medicine Practitioners Board.

Career Prospects

If students have completed the 5 years full time Chinese Medicine bachelor degree, with a pass in Chinese Medicine Practitioners Licensing Examination, they can be registered as licensed Chinese Medicine practitioners. The students from School of Chinese Medicine obtained 100% pass in the recent years' Chinese Medicine Practitioners Licensing Examination.

Some of the Chinese Medicine graduates practice Chinese Medicine at the government, non-profit making and private Chinese Medicine clinics. Some have setup their own Chinese Medicine clinic or have entered the industry of Chinese herbs. Some may choose to enter the field of research to develop and conduct research in areas including life sciences, medicine, pharmacy and healthcare etc. Some have choose to work at the government or private sector for the administration work in Chinese medicine and Chinese herbs; or further their studies by studying master and doctoral degree, so as to work at Chinese medicine academia and related administration work.

中醫學本課程由中醫學院開辦，並由理學院及醫學院共同參與教學，旨在培養有生命科學基礎、醫學常識及諳熟中醫理論與運作，並能夠揉合現代醫學知識與傳統中醫學的醫師。

本課程為期五年，包括理論課及臨牀學習。理論課程包括醫學基礎、生命科學、中藥學、中醫學概念及理論、中醫經典、中醫分科 （包括內科、婦科、小兒科、骨傷科、針灸）及其他科目。

在課程的第二部分，學生於本港或內地中醫診所作臨牀學習。在首九個月的臨牀學習中，學生須往內地中醫院上課及實習，涉獵多個不同專科範疇。修畢全部課程及考試及格者將獲頒授中醫學學士學位，本科畢業生可申請參加香港中醫執業資格試成為註冊中醫。

就業前景

中醫學學生只要完成五年全日制中醫學學士學位課程，通過中醫執業資格試，就能成為註冊中醫師。中醫學院畢業生近年於中醫執業資格試屢創 100% 及格佳績。

有些成為了註冊中醫師的畢業生於政府機構、非牟利社團或私營中醫診所執業；或開設私人中醫診所。有些中醫學院畢業生投身中醫行業，或於政府或私營機構從事中醫中藥行政工作。亦有一些畢業生選擇投身研究工作，例如生命科學、醫學、製藥業、健康食品等研究及開發工作。亦有一些畢業生繼續深造，修讀碩士、博士課程，以投身中醫中藥教學及管理相關工作。

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Mathematics

The Department offers three specialized streams of studies: mathematics, computational and applied mathematics, and enrichment in mathematics; each with different core requirements. In the area of pure mathematics, the topics on offer include number theory, abstract algebra, real and complex analysis, functional analysis, differential geometry, topology and differential equations. In the area of applied mathematics, the topics on offer include probability, financial mathematics, operations research and logistics, optimisation theory, game theory, coding theory and cryptography and numerical analysis. Qualified undergraduates may take mathematics courses at the graduate level.

The curriculum is highly flexible and provides students greater freedom to enrol in a minor programme. There are also summer courses and summer internship programmes to prepare students for their careers. The Department is also actively engaged in research, thanks in part to the CUHK Institute of Mathematical Sciences, headed by world-renowned mathematician Prof. Yau Shing Tung.

Career Prospects

Due to the development of the society, the career opportunities of a mathematics graduate are diverse. Mathematics has specially designed courses channelled into such new areas and their training emphasizes on basic analytical skills. With a suitable minor or option, their skills can be used in different careers like banking, commerce, actuarial science, communication, and computer science. The traditional secondary school teaching will always be in demand. If you are more ambitious, you may want to go to Graduate School where you will have broad choices from classical mathematics to the latest new areas. Perhaps you want to go into some more applied areas like finance or engineering. It is highly possible because you will have learned the needed foundation in our programme.

Mathematics and Information Engineering

This programme provides students with an interdisciplinary study and sufficient diversity in advanced knowledge of mathematics and engineering. The programme is designed for a double degree within four years, and is jointly offered by the Departments of Mathematics and Information Engineering. The BSc degree in Mathematics is awarded after three years of study and the BEng degree in Information Engineering is awarded after the optional fourth year.

The programme covers a broad range of topics in mathematics and information engineering and prepares students with a solid foundation and training in both fields. Career opportunities for holders of the dual degrees cover a wide spectrum, including teaching/research in mathematics and theoretical engineering, as well as industrial engineering practices.

數學系的課程設有三個專修組別：數學組、計算及應用數學組和數學精研組，各有不同的基本要求。在純數學的範疇，可供選讀的科目包括數論、抽象代數、實和複分析、泛涵分析、微分幾何、拓樸學及不同的方程式等。在應用數學的範疇，則有概率論、金融數學、運籌學與物流學、優選學、搏奕論、編碼和密碼學、數值分析等科目。成績優異的本科生，還可以「越級」修讀研究院的科目。

這種富彈性的課程設計可讓同學更自由選擇副修科目。為裝備學生應付未來的挑戰，本系設有暑假課程和暑假實習計劃。系內教研人員的努力，加上與著名數學家丘成桐教授領導的中大數學科學研究合作，產生了豐碩的研究成果。

就業前景

基於社會的發展與進步，數學系的畢業生有很廣泛的出路。數學系特意制定課程針對一些新發領域，為學生重點提供分析能力的鍛鍊。配合副修課程，他們能於不同行業一展所長，包括銀行、商業、精算科學、通訊及電腦科學等。而傳統中學老師亦是長期有需求的行業。你亦可以到研究院繼續進修，揀選一系列由傳統數學到最新的數學範疇的課程，例如實用性較高的金融及工程。

數學與信息工程學

本課程為四年制雙學位學士課程，由數學系與信息工程學系合辦，旨在為學生提供跨學科的研習機會，讓他們同時學習數學與工程方面的專業知識。學生完成首三年課程後將獲數學理學士學位，完成第四年課程後將再獲信息工程學士學位。這課程涵蓋面深廣，既充實且多元化，融合數學與工程學的高深知識，致力培養在這兩個專業上根基紮實、訓練全面的人才。持有雙學位的畢業生將擁有更寬廣的就業空間與發展機會，既可從事與數學及理論工程有關的教學與研究，又可投身工商業界，參與實際的工程事務，作深入的發展。

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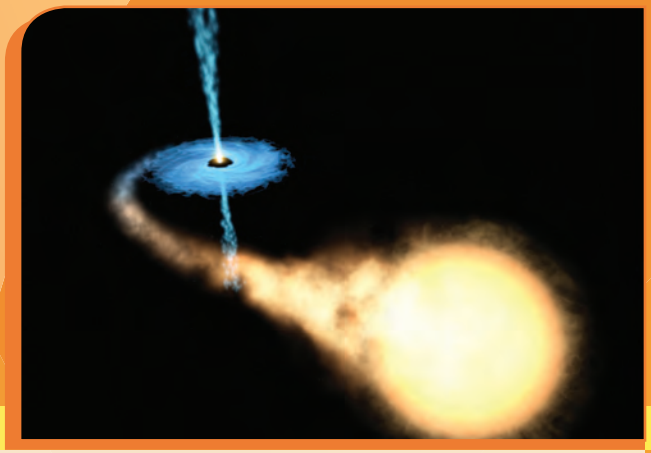
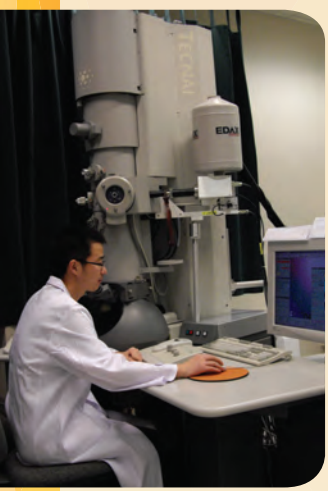
Physics



Physics is a study of the basic regularities behind the various complex phenomena in the physical world; the scope of the subject ranges from the tiniest, like quarks in a proton, to the largest, like the universe. The objective of the physics programme is to enable students, through lectures, laboratories, group discussions, and various student-centred learning opportunities, to have a good grasp of fundamentals of Physics and general methods of their studies, and to appreciate and understand their important applications in modern society.



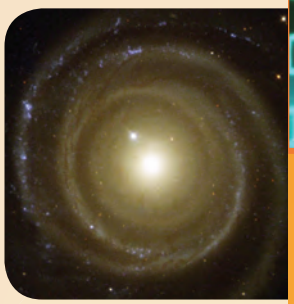
The core part of the physics major curriculum which is required of all and meant to build a solid foundation for students, consists mainly of courses on classical and modern physics. Newtonian mechanics and electromagnetism, supplemented by thermodynamics and optics, constitute the classical physics while quantum mechanics and its simple application to understand the behaviour and structure of matter at various levels constitute the modern physics.

Besides, there are two streams of courses that students can choose to meet their various needs and aspirations, namely, the physics stream and the enrichment stream in theoretical physics. The latter is particularly suitable for those interested in further studies. In addition, a number of courses, e.g., astronomy, relativity, astrophysics, computer simulation, solid state physics, laser physics, photonics, instrumentation, materials characterisation, nanoscience, physics project and graduate courses, etc. are available for the students to choose as electives in order to fulfil their major requirements and to satisfy their own interest.

Career Prospects

University Appointments Service's statistics in recent years indicate that 54% of Physics graduates continue to pursue higher degrees in Physics or related subjects. Among those graduates who are in employment, 62% take up careers in the industry and commerce sectors, which is made possible by their training in analytical perception and command of technical knowledges; 31% serve in education institutes; 3% join the Government, and other sectors. In recent years the majority of Physics graduates and MPhil graduates who continued to puruse higher degree abroad have been admitted into the graduate schools of distinguished universities, where they have been awarded financial supports in the form of teaching assistantships and scholarships. Many of the physics alumni now hold senior posts in renowned academic and research institutes in the United States, Taiwan, and Hong Kong, while many more others occupy prominent positions in various sectors in society.

物理學的範疇極其廣闊，然而不論小如原子或大如星雲，其中的現象都會遵循一定的規律，從而歸納為一些原理和定律。本系課程旨在藉講授、實驗、小組討論、研討會及以學生為本的學習方式，使同學了解物理原理和定律、熟習常用的理論方法和實驗技巧、並掌握現代科學知識，以用於分析和克服新的挑戰，有助於他們日後在科研或其他工作領域上作出貢獻。



物理課程有核心科目、組別科目及選修科目三部分。核心科目主要由經典和近代物理組成，替同學紮下堅實的物理學根基。經典物理以經典力學和電磁學為骨幹，輔以熱力學和光學。近代物理以量子力學為基礎，探討並瞭解物質各種層次的結構和行為。組別科目分別為物理組及理論物理精研組，後一組特別為有志於深造同學而設。除此之外，本系還設有天文學、相對論、天體物理、電算模擬、固態物理、光子學、激光物理、儀器學、材料測試、納米科學、物理專題、及研究院等科目。

就業前景

根據大學畢業生就業統計，近年有 54% 的物理系畢業生選擇繼續升學，修讀物理或其相關科目之高等學位。而其餘正在就業的畢業生，當中的 62% 畢業生憑藉其分析能力及技術知識在工商業界工作；31% 在教育界工作；3% 加入了政府和其他工作界別。近年，到海外深造的本科畢業生和研究碩士畢業大多數入讀一些著名大學的研究院，並獲得研究生獎學金或助學金。物理系有很多舊生都在美國、台灣及香港等地的著名學府及研究所身居要職，亦有不少在社會上不同的工作界別擔任著重要的職務。

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Quantitative Finance and Risk Management Science

The Programme is jointly offered by the Department of Finance and the Department of Statistics. The Programme offers a comprehensive curriculum which covers quantitative finance, risk management science, business, statistics, economics and accounting principles. Students would have mastered a wide range of tools required today and would be well-equipped to meet the challenges posed by changes in global economy. It inculcates state-of-the-art knowledge in finance and risk management, statistics and business. Graduates will have mastered the wide range of tools required today by sophisticated financial practitioners and will be uniquely well-equipped to meet the challenges posed by changes in global economy.

計量金融學及風險管理科學

本課程由財務學系和統計系共同開設。全面的課程涵蓋跨學科的科目，如計量金融、風險管理、商業、統計學、經濟學和會計原理等。學生能掌握一系列最新的工具和知識，並為環球經濟變遷所帶來的挑戰作好準備。課程糅合了金融及風險管理的精萃，旨在提供有關金融、風險管理、統計及商業的專業知識。畢業生將成為具備全面金融及風險管理專業知識與技能的金融專才，並為環球經濟變遷所帶來的挑戰作好準備。

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Risk Management Science

The programme, administered by the Department of Statistics, is designed for students seeking a career in financial and insurance institutions and having a strong aspiration in the scientific methodologies. Statistics constitutes an indispensable component of risk management since it provides the theoretical and practical underpinnings for risk management models. As risk management is an interdisciplinary subject, students of this programme not only receive a solid training in statistics, but also a comprehensive exposure to other subjects such as finance, economics, accounting, mathematics, and computer science. The core programme comprises of courses from various departments such as numerical methods, portfolio managements, financial economics, data structures, and accounting principles.

Career Prospects

While some of the Risk Management Science graduates have continued their study and pursued a high degree in Hong Kong and overseas, most have joined the work force after graduation. Almost all of them are working in the banking, financial or insurance industries. Possible positions are accounting officer, actuarial officer, market risk analyst, market risk officer, financial analyst, credit risk officer, assistant risk manager, quantitative analyst and others, in major banks, investment banks, security houses, insurance companies and big 4 accounting firms.

風險管理科學

本課程由統計學系開設。課程強調如何應用客觀數理科學方法去分析現有數據，增強對未來風險的預測能力。確定風險的源頭，估計風險發生的機會率和可能帶來的損失。這正好突顯出風險管理的科學成份，也解釋了它與統計學的緊密關係。因此本課程特別適合對理科有濃厚興趣而又想投身金融或保險業發展的同學。

統計學為風險管理模型，提供了理論和應用的依據，因此成了風險管理科學必然的組成部分。正因風險管理是一個跨領域的學科，修讀此課程之同學不僅需要接受嚴謹的統計學訓練，還要廣泛接觸其他學科，如金融、經濟、會計、數學和電腦科學。課程之核心亦包括有其他學系的科目，例如數值方法、組合管理、金融經濟、數據結構和會計原理。

就業前景

有部份畢業生畢業後選擇繼續在海外或本地升讀高級學位，但大部份都投身社會工作。大部份都在銀行、金融或保險業工作，在香港的主要銀行、投資銀行、保險公司及香港四大會計行當中擔任以下的職位：會計師、精算師、市場風險分析員、市場風險報告員、金融分析員、信貸風險員、助理信貸風險管理主任、計量金融評估員等。

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Statistics

Statistics is a collection of methods for planning experiments, gathering data, and then summarising, presenting, analysing, interpreting, and drawing conclusions based on the data. Therefore, statistics is fundamental to all fields in natural science, medical science, social science, business, and engineering where quantitative analysis of data is essential. To achieve these objectives, the curriculum of the programme is well balanced between application and theory, and covers the foundations of statistics, computing and data management, statistical theories and methods, statistical applications in business, forecasting, biostatistics, actuarial science, quality control, and risk management science.

Flexibility is also given to students to select between the "Applied Statistics Stream" and the "Data Science and Business Statistics Stream". In addition, students are required to take part in workshops, conduct case studies, and work on statistics projects under the supervision of teaching staff so as to sharpen their statistical skills as well as to acquire experience in handling real-life problems. The startling increase in the supply of data in the information technology era creates a big further demand on statistical professionals.

Career Prospects

Although some of the statistics graduates have continued their studies and pursued a higher degree, most have joined the workforce after graduation. As evidenced by the career development of our graduates, they are well-received in various sectors of the community. Many now hold key positions in the civil service and in such private sector fields as business, finance and banking and research and marketing.

Admissions Coordinator 入學聯絡人

Professor K H Li
李劍鏗教授

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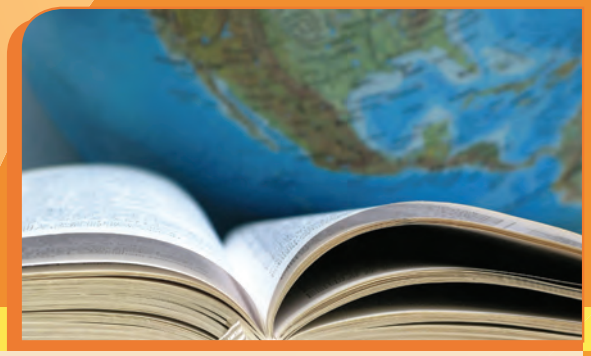
統計學是一門研究數據的科學，內容包括設計試驗、收集數據，並對數據作出撮要、表達、分析、闡釋和總結。因此統計學在所有要求對資料作出數量分析的學科中都極為重要。它被廣泛應用於財務、經濟、公眾健康、醫療、資訊工程、生物資訊和心理學等範疇。統計學課程注重應用和理論的平衡，亦兼顧個別的專研興趣。課程廣涉統計基礎、計算與數據管理、統計學理論與方法，以及統計學於商業、預測、生物統計、精算學、品質控制和風險管理的應用。為配合同學的不同取向，統計課程分「應用統計組」和「數據科學及商業統計組」兩個專修組別供同學選擇。統計畢業生的出路很廣。另外，學生也需要在教師的指導下參與工作坊，進行事例研究和製作統計研究計劃，以磨練他們的統計分析技巧和提供處理真實問題的經驗。 在當今資訊科技的年代，數據的大量湧現更造就出社會對統計專業人才的極大需求。

就業前景

有部份統計學系畢業生畢業後選擇繼續在海外或本地升讀高級學位，但大部份都投身社會工作。大部份畢業生都在政府公務員行列或商業、金融、銀行、研究及行銷等行業擔任重要職位。

Student Sharing

學生分享



Our undergraduate curriculum employs a diversity of teaching and learning approaches to ensure that learning outcomes are achieved with the most effective learning methods. In addition to lectures, tutorials and laboratories, all students are encouraged to acquire some diverse learning experiences in the form of internships, undergraduate research and exchange study. We believe such experiences can enhance their ability in communication and intercultural understanding and better prepare them for various challenges in this ever-changing world.

理學院的學士學位課程利用多元化的教學及學習方法，有效地達致最佳的學習效果。除了課堂、修課及實驗課外，理學院亦鼓勵學生透過工作實習、研究體驗及交換生計劃等，取得更多元化的學習體驗。我們相信這種經驗能加強學生的溝通能力，及加深學生對不同文化間的認識，好讓學生在畢業後更能面對未來的各樣挑戰。

Internships

Internship opportunities allow students to acquire a better understanding of the working environment in their chosen industry to prepare them for employment. Many internship opportunities for science students are provided by local and overseas firms. Some internships provided by universities, which allow students to learn the nature of a particular discipline, so as to prepare them for further studies.

工作實習機會能讓學生在正式投入其專業前，能對該專業的工作環境有更深入的了解。很多理學院學生的工作實習機會都是由本地或海外的機構提供。由不同大學所提供的工作實習機會，讓學生更加明白個別科目的內容，為他們升學進修作好準備。

Internships 工作實習

Chan Shu Wing (Biochemistry)
CK Life Sciences Limited, Hong Kong

The working experience was quite valuable to me. My supervisor actually treated me as a new colleague who can handle the same type and level of work like him. At the beginning, he asked me to fill in the tip box. I thought that the purpose of summer internship was not to learn the tip box filling technique which appeared stupid and tedious to me at first. He further taught me the techniques of autoclaving biochemical wastes and glass wares that would be used in experiments. These techniques seemed meaningless to me, but later I discovered that they were actually the 'house-keeping' skills for me to survive in a lab. If I decide to work in a lab in my future, no one will autoclave the wastes for me and no one will fill the tip box for me. These dull tasks must be done by myself.

Apart from the skills described above, I learned numerous useful skills such as HPLC, TLC, data analysis skills, cell culturing, monitoring microscopes, assays, etc. It would be a wise choice to work in CK Life Sciences Limited if you want to gain some experience of the career in a local biotechnology firm.

(Credit to Biochemistry, Helix Issue 4 for the student sharing)

我很珍惜這次的實習經驗。我的導師把我當作一位懂得應付與他同等工作份量的新同事。雖然，我的第一份工作只是要把槍頭盒填滿，而我還抱怨實習不應只做這些「簡單工作」。之後，他並教我在實驗中利用壓力蒸汽除去生化廢物及清洗玻璃製品，起初我不明所以，以為這些「簡單工作」沒有實際用途；後來我才知道這些技巧，能確保實驗室內的工作順利。要是將來我從事研究工作，是沒有工作人員會替我把用具進行清洗及消毒，也沒有人會替我把槍頭盒填滿，這些都是需要自行處理的事務。除上述技巧外，我還學會了HPLC、TLC、數據分析、細胞培養、監察顯微鏡、化驗等技巧。

(特別鳴謝生物化學刊物 Helix Issue 4 提供學生分享)

Sharing分享

Ka Ho Chan (Statistics)
AirGini Asia Pacific Limited, Hong Kong

As a Marketing Research Analyst in AirGinin Asia Pacific Limited, I learned a great deal of practical skills and knowledge. I acquired a clear picture of marketing research, as AirGini provided a precious opportunity for me to draft a research design and co-ordinate the research process. This experience was definitely useful and paved the way for my future career.

在 AirGinin Asia Pacific Limited 的實習期當中，我擔任市場研究分析員一職，我學習了大量實用的技巧及知識，亦因此更了解有關市場研究的工作情況。AirGini 亦提供了一個寶貴的機會，讓我可以設計一份市場研究計劃書，以及統籌研究。這次的經驗很重要，亦為我將來的職業生涯作好準備。

Undergraduate Research Exchanges

Project-based learning allows students to gain in-depth knowledge of a specific topic not fully covered in the regular courses. Students undertake an independent research project under the supervision of a professorial teacher in their second or third year. Examples of undergraduate research opportunities include Dedicated Research Exchange and Mentorship (DREAM Programme) by the Biochemistry Programme, Summer Undergraduate Research Exchange (SURE programme) by Department of Physics, Overseas Research Fellowship and Summer Research Fellowship.

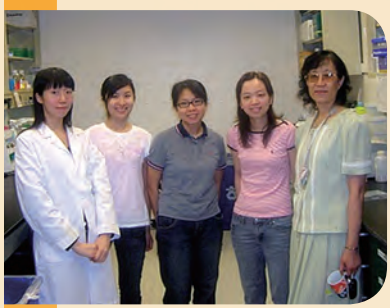
本科生研究交換計劃專題研集有助學生對在課堂上不能完全涵蓋的個別課題加深了解。在第二或第三學年，學生在外校教授的指導下進行個人專題研究習作。本科生研究交換計劃包括：由生物化學課程舉辦的 DREAM (Dedicated Research Exchange and Mentorship)、由物理系舉辦的 SURE (Summer Undergraduate Research Exchange)、海外研究交換獎學金計劃以及暑期研究獎學金計劃。

Undergraduate Research Exchanges
本科生研究交換計劃

Wong Tsz Ying, Michelle (Biochemistry)
Supervisor: Prof. Ho Suk Mei
Location: University of Cincinnati, USA
Topic: Hormonal carcinogensis in the prostate

It was a pleasure to work in such a professional research environment in the Environmental Health Department of the University of Cincinnati, USA. Most importantly, being able to experience the American way of living and learn about American culture made my journey unforgettable and fruitful. I worked as a student worker in my supervisor's lab and my projects were related to the effects of estrogenic compounds on prostate cancer. Although most of my colleagues were PhDs, they were patient and passionate enough in teaching me things and helping me solve any experimental difficulties. Although my research studies were not smooth, the joy of experiencing the American life during those three months compensated the frustrations I had in my research studies. Finally, I really want to express my thanks to the Biochemistry Programme for organizing this meaningful mentorship program for students. I really think this is one of the most valuable and precious experiences in my life.

(Credit to Biochemistry, Helix Issue 4 for the student sharing)

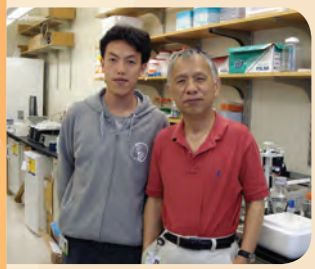


能在美國辛辛那堤大學環境健康系那麼專業的工作環境下工作，是我的榮幸。最重要的是，能夠在美國體驗當地的文化和生活，讓我獲益良多、沒齒難忘。我在指導教授的實驗室內工作，進行關於雌激素對前列腺癌的影響的專題研習。雖然我的同事大部份都是博士生，但他們都很有耐性和熱情地教導我，又幫助我解決我在實驗室內遇到的疑難。縱然我的研究並不順利，不過，我體驗了三個月愉快的美國生活，就足以抵償研究不順所帶來的挫敗感。最後，我想感謝生物化學課程舉辦了這個富有意義的交換計劃。這真是既有意義又寶貴的經驗。

(特別鳴謝生物化學刊物 Helix Issue 4 提供學生分享)

Sharing分享

Undergraduate Research Exchanges
本科生研究交換計劃



Chan Wa Cheong (Biochemistry)
Harvard Medical School, USA
Supervisor: Prof. Jia-Huai Wang
Topic: Structure-function Study of Influenza Virus Protein

It is always challenging to be abroad. You will experience many unfamiliar things including food, work and the like at the same time. Luckily, people were friendly and helpful at Harvard University where I conducted my DREAM internship research.

I joined Prof. Jia-Huai Wang's laboratory in the Dana Farber Cancer Institute at Harvard Medical School, and was involved in a project that investigated the structure-function of influenza virus protein. I would use hard-working, self-disciplined and willing to share to describe the work atmosphere at the Institute. Working overnight is not unusual in the Institute, therefore a shower room was built for scientists who work overnight. All the communal equipment in the Institute were well-maintained as people here were so self-disciplined that they would clean up the equipment after use. My favorite time of each day was lunch time because people from different laboratories gathered in the conference room to have their lunch and chat. Not only a time for relaxation, this short period of gathering also fostered many new research ideas.

It is rewarding to do internship abroad. It is challenging because you will have to live independently and deal with many problems by yourself, gaining memorable experiences as well as satisfaction.

(Credit to Biochemistry, Helix Issue 6 for the student sharing)

在海外生活總是充滿挑戰，由食物到工作等你都可能要重新適應。幸好，我在哈佛大學進行 DREAM 的研究交換計劃，所遇到的人都既友善又樂於助人。

我參與了王嘉淮教授 (Professor Jia-Huai Wang) 在哈佛大學醫學院的 Dana Farber Cancer Institute 的實驗研究所，而我所參與的專題是研究感冒病毒的蛋白質的結構功能。我會以勤奮、自律和互助來形容這裡的學習氣氛。在實驗室內通宵工作也不是什麼怪事，所以在實驗室內會有洗澡設備。而公用設備亦保養得很好，因為大家都會在使用過後把那些設備及器具清潔乾淨。每日最讓我高興的時間就是午飯之時，因為大家都會聚集在會議室中，一邊吃午飯一邊聊天，不但能放鬆一下，亦有可能在這段短時間內孕育出很多不同的研究新方向。

在海外進行工作實習確實讓我獲益良多，每天都面對著很多不同的挑戰，獨自生活，要學懂照顧自己，解決各種不同的問題，這些都是寶貴的經驗。

(特別鳴謝生物化學刊物 Helix Issue 6 提供學生分享)

Hung Ho Yeung (Mathematics)
Supervisor: Prof. Spiro Karigiannis
Location: University of Waterloo, Canada

This opportunity enabled me to experience many new things. We read a few research papers on special Lagrangian Geometry. At times, I would spend the whole afternoon verifying a computation stated in the paper. At other times, I might sit in the library for a whole day trying to digest three or four pages of a paper. To be frank, I often felt frustrated reading those papers as the mathematical problems are formidable. However, as time passed, it started to appear to me that this experience is actually positive and beneficial. I learned how to cope with frustration. It also equipped me with patience and self-reflection to face future challenges. There was one truly unexpected reward from this research project experience – it helped me understand myself much more deeply.

這次的經驗讓我體驗了很多新鮮的事：閱讀過幾篇有關特殊拉格朗日幾何的論文後，我們花上一整個下午，在覆核期刊內提供的計算結果；又或是一整個下午坐在圖書館內，為的是消化一份論文當中的三、四頁。事實上，看著一道道艱深的數學難題，讓我好不沮喪。隨著時間過去，我漸漸感受到這次經驗所帶來的正面影響，我學會如何對抗沮喪的情緒，我學會了在面對挑戰時要有耐性和要有自省的能力，而這次研究交換更 我帶來很好的意外收穫那就是加深了對自己的認識。

Sharing分享

Exchange Programme

The Faculty strongly supports exchange programmes which allow undergraduates to study at overseas universities for a semester or a year. The University offers over 200 student exchange programmes in 28 countries / regions.

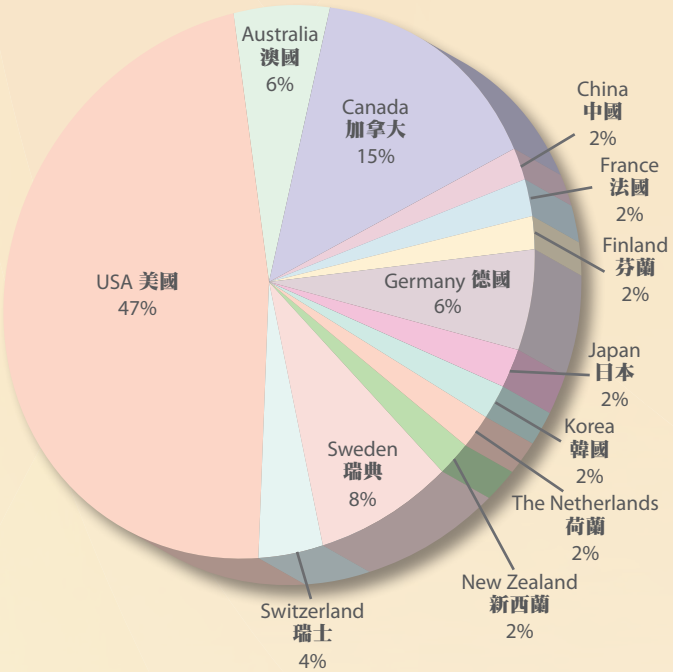
交換生計劃理學院極力支持交換生計劃，讓本科生在海外大學作一個學期或一學年的交換生。大學在 28 個國家/地區提供超過共 200 個交換生計劃。

Selected list of exchange universities
部分接待交換生的大學

Statistics on Science Students on Exchange in Recent Years
理學院近年交換生統計

Academic Year 學年	No. of Science Students on Exchange 理學院交換生人數
02/03	6
03/04	13
04/05	20
05/06	22
06/07	39
07/08	44
08/09	49
09/10	51

2009-10 Outgoing Science Exchange Students by Destination
理學院交換學生之目的地



Exchange Programme
交換生計劃

Huang Shao Ying (Physics)
Supervisor: Prof. Richard Gaitskell
Brown University, USA
Topic: Large Underground Xenon: Dark Matter Experiment

Although I was in USA for exchange for two-month only, I was able to experience the life of the postgraduate students in US. The research team that I worked with is responsible for the research of the dark matter hardware. During work, I learned to communicate with and listen to the others, express myself accurately and raise questions. Through daily conversations with my tutor and colleagues, I had learned a lot from them.

In Brown University, they provided platforms for summer research student to exchange ideas: during dinner parties and seminars, apart from introducing your own research to others, you can also learn about other students' works and this is a very valuable experience. Besides, I joined the local parties, dinner parties, trips and experienced the local practice and custom, and widen my vision.

在美國交流了短短兩個月，我體驗到留美研究生的生活。我參與的研究小組負責暗物質實體的硬件部份。在工作過程中，我學會了與人溝通、聆聽、準確地表達自己意思和把握時間發問；平日與導師和同僚聊天更讓我增廣了不少見聞。

布朗大學也為暑期研究的學生提供一些交流平台：在聚餐和討論會中，除了介紹自己的研究外，還可了解其他學生的研究工作，那是一個十分寶貴的經驗。此外，我還參加當地的派對、聚餐、外遊，體驗當地的風土人情，增廣了自己的遊歷。

(Credit: Physics, Summer Undergraduate Research Exchange Program (SURE), 2009)

Sharing分享

Exchange Programme
交換生計劃

Lam Ting Fai (Physics)
Supervisor: Prof. Jen-Chieh Peng
University of Illinois of Urbana-Champaign, USA
Topic: Magnetic Field Uniformity of Helmholtz Coils and Cosine Coils

Although it's been only two and a half months, SURE gave me an experience for life. I had the opportunity to learn about research from a professor of a famous university overseas. This is a profound experience.

The weekly lunch seminar held in UIUC allowed me to come into contact with different Physics research areas. The overseas students are active and passionate. They are the role-model for me. I treasured this opportunity to travel to Chicago and New York to widen my vision.

雖然只有兩個半月，SURE 給我的經驗卻一生受用。可以跟隨外國著名大學的教授學習做研究的心得，無論研究是成功還是失敗，都是深刻的體驗。

伊利諾大學厄巴納香檳分校的午餐講座可以讓我接觸不同領域的物理學研究；外國學生的主動、積極，給我一個良好的榜樣。而我也借這次機會，到芝加哥、紐約遊歷，擴闊了視野。

(Credit: Physics, Summer Undergraduate Research Exchange Program (SURE), 2009)

Wong Tsz Ching (Physics)
Supervisor: Prof. Yuk Yung
California Institute of Technology, USA
Topic: Ozone Retrieval Using Polarization Data

My research is to analyse the concentration of ozone in troposphere. My work includes reading journals, writing computer programmes and attending tutorials.

In Pasadena, the air is arid and the sun is bright. With the clear sky, even in the urban area, I can still see many stars up in the sky. Although the campus is only half of that of the Chinese University of Hong Kong, but with its joyous scenery, the environment is almost perfect and I often see squirrel. During weekends, I would go hiking it was my favourite activity. I also went to the Mount Wilson Observatory to look at the 100-inch telescope that Hubble used to discover the universe.

我的研究是分析對流層中的臭氧濃度。工作包括閱讀論文、寫電腦程式及出席小組會議。

在帕薩蒂納這小城，空氣十分乾燥，陽光較猛。這裏夜空清澈，即使在市區都能見到很多星。雖然校園只有中大的一半大小，但周圍鳥語花香，環境極佳，更經常看見松鼠！在週末，我會行山遠足，這是我最愛的活動！我曾到威爾遜山天文台參觀，看到哈勃發現宇宙的一百吋望遠鏡。

(Credit: Physics, Summer Undergraduate Research Exchange Program (SURE), 2009)

Sharing分享

Admissions

入學申請

Routes to University
入學途徑

JUPAS 聯招

Students who are currently Secondary 7 students or private candidates with Hong Kong Advanced Level Examination Results, can apply through the JUPAS scheme. Applications should be submitted to the JUPAS Office via the web.

現正就讀中七學生或持有高級程度會考成績的自修生，可透過大學聯合招生報讀中文大學，請透過互聯網向「大學聯合招生處」提交申請。

Non-JUPAS (Local) 非聯招(本地)

Students who are not applying on the strength of Hong Kong Advanced Level Examination, such as students doing GCE, IB, SAT, higher diploma, Associate Degree or other international examinations are considered as non-JUPAS applicants.

本地學生持有香港高級程度會考以外的成績，例如：GCE、IB、SAT、高級文憑、副學士或其他國際考試的成績，都可透過非聯招途徑入學。

Early Admissions Scheme for Secondary Six Students (EAS) 中六生優先錄取計劃

Local secondary six students with outstanding performance in HKCEE can submit their application to the JUPAS Office.

Non-local secondary six students with outstanding performance can submit their application to Office of Admissions and Financial Aid.

本地中六學生於香港會考取得優異成績者，可直接向「大學聯合招生處」提交入學申請，詳情請留意「大學聯合招生處」互聯網上通告 。

非本地中六學生並取得優異成績者，可向中文大學入學處提交入學申請，詳情請留意中文大學入學及學生資助處互聯網上通告。

Non-Local Students Admission 非本地學生入學

- ***International Students***
  國際學生

  Students who require a student visa to study in Hong Kong and are completing GCE, IB, SAT, higher diploma, Associate Degree or other international examinations, can apply for full-time undergraduate studies at CUHK through this scheme. Applications can be submitted to Office of Admissions and Financial Aid.

  持學生簽證者，同時正在修讀 GCE、IB、SAT、高級文憑、副學士或其他國際考試的成績，可透過本計劃向中文大學入學及學生資助處提交入學申請就讀中文大學全日制課程。

- ***Admission through National Colleges and Universities Enrollment System***
  全國普通高校統一招生計劃

  CUHK has been admitting Mainland students since 1998 and has launched the Admission of Undergraduate Students from the Mainland Scheme in 2005. Current Mainland high school students who wish to study at CUHK are welcome to apply through the scheme.

  香港中文大學在 1998 年開始招收內地本科生，並由 2005 年開始通過全國普通高校統一招生計劃招收內地本科生。歡迎有意報讀中文大學的內地預科生透過全國普通高校統一招生計劃申請入學。

Enrolment (2010-11) [as of Sept 2010]
學生人數 [2010 年 9 月計算]

Programme 課程	
Chemistry 化學	61
Chinese Medicine 中醫學	28
Mathematics 數學	50
Physics 物理	66
Risk Management Science 風險管理科學	25
Statistics 統計學	45
Mathematics and Information Engineering * 數學與信息工程學	14
Life Sciences 生命科學 (including Biochemistry, Biology, Environmental Science, Food and Nutritional Sciences, Cell and Molecular Biology, Molecular Biotechnology) (包括生物化學、生物、環境科學、食物及營養科學、細胞及分子生物學、分子生物技術學)	207
Interdisciplinary Major Programme in Quantitative Finance and Risk Management ** Science 計量金融學及風險管理科學	26
Total 總數	522

** The Mathematics and Information Engineering Programme is a double-degree programme jointly offered by the Department of Mathematics and Department of Information Engineering.* 數學及信息工程學是由數學系及信息工程學系合辦。

*** The inter-disciplinary major programme in Quantitative Finance and Risk Management Science is jointly offered by the Department of Finance and Department of Statistics.* 計量金融及風險管理科學跨學科主修課程是由財務學系及統計學系合辦。

Entrance Requirements (2011-2012)

Programme	*Requirements*
Life Sciences	(i) AL Biology or AL Chemistry; and (ii) One AL subject or two AS science subject
Chemistry	(i) AL Chemistry and one other AL science subject; or (ii) AL Chemistry and two other AS science subjects *(option (i) is preferred)*
Chinese Medicine	Any Science subject at AL/AS
Mathematics	AL Pure Mathematics
Physics	(i) AL Physics (ii) Any one other AL science subject; or any one AS science subject and any one other AS subject
Quantitative Finance and Risk Management Science	In one sitting^ of HKALE, grade E or above in AS Chinese Language & Culture, AS Use of English, AL Pure Mathematics and 1 AL or 2 AS subjects ^ *For applicants who have obtained outstanding results in HKCEE and satisfied the specific conditions for entering for HKALE in Secondary 6 and 7, the results of both sittings will be considered.*
Risk Management Science	(i) AL Pure Mathematics; and (ii) Subject(s) from AL/AS science subjects, AL Economics and, AL Business Studies
Statistics	At least one subject from AL Pure Mathematics, AL/AS Applied Mathematics, AS Mathematics & Statistics, AL Physics or AL Chemistry.
Mathematics and Information Engineering	(i) Good grade in AL Pure Mathematics; AND (ii) Good grade in any one other AL science subject, or any two AS science subjects

課程入學資格 (2011-2012)

課程	香港高級程度會考要求
生命科學	(i) 高級生物或高級化學；及 (ii) 任何一科高級理科科目或兩科高補理科科目
化學	(i) 高級化學，另加任何一科高級理科目；或 (ii) 高級化學及任何兩科高補理科科目 <選擇 (i) 為佳>
中醫學	任何高級或高補理科科目
數學	高級純粹數學
物理	(i) 高級物理；另加 (ii) 任何一科高級理科目；或任何一科高補理科科目及任何一科高補科目
計量金融學及風險管理科學	於同一次 ^ 香港高級程度會考中，高補中國語文及文化科、高補英語運用科、高級純粹數學，及一科高級科目或兩科高補科目考獲 E 級或以上成績 ^ 如申請人以優異之中學會考成績及符合指定求要，在中六及中七皆應考高考，該兩次成績均會被考慮
風險管理科學	(i) 高級純粹數學，另加 (ii) 下列任何科目：高級或高補理科科目，高級經濟學及高級企業概論
統計學	至少一科必須為高級純粹數學、高級或高補應用數學、高補數學及統計學、高級物理或高級化學
數學與信息工程學	(i) 高級純粹數學，另加 (ii) 任何一科高級理科科目或兩科高補理科科目

2009 Admissions Grades 課程入學成績

Chemistry 化學

	Admission Figures	UE	CLC	AL-1	AL-2	AL-3	AS-1	AS-2	AS-3
HKALE Grades	75th Percentile	D	D	A	C	C			
	50th Percentile	D	E	B	B	D			
	25th Percentile	D	D	B	D		C		

	Admission Figures	ENG	CHI	Subj. 1	Subj. 2	Subj. 3	Subj. 4	Subj. 5	Subj. 6	Subj. 7	Subj. 8
HKCEE Grades	75th Percentile	4	5	A	B	B	B	C	C	C	
	50th Percentile	3	3	A	B	B	C	C	C		
	25th Percentile	4	3	A	A	B	B	B			

Chinese Medicine 中醫學

	Admission Figures	UE	CLC	AL-1	AL-2	AL-3	AS-1	AS-2	AS-3
HKALE Grades	75th Percentile	B	C	D	D	D			
	50th Percentile	D	C	D	D	E			
	25th Percentile	D	C	D	D	E			

	Admission Figures	ENG	CHI	Subj. 1	Subj. 2	Subj. 3	Subj. 4	Subj. 5	Subj. 6	Subj. 7	Subj. 8
HKCEE Grades	75th Percentile	5	5*	B	B	B	B	B	C	C	
	50th Percentile	4	5	B	B	B	C	C	C		
	25th Percentile	4	3	B	B	B	B	C	C		

Mathematics 數學

	Admission Figures	UE	CLC	AL-1	AL-2	AL-3	AS-1	AS-2	AS-3
HKALE Grades	75th Percentile	E	D	A	A	B			
	50th Percentile	E	D	A	B	C			
	25th Percentile	E	D	B	B		B		

	Admission Figures	ENG	CHI	Subj. 1	Subj. 2	Subj. 3	Subj. 4	Subj. 5	Subj. 6	Subj. 7	Subj. 8
HKCEE Grades	75th Percentile	3	2	A	A	B	B	D			
	50th Percentile	3	3	A	A	B	C	C	D		
	25th Percentile	2	2	A	A	B	C	D			

Physics 物理

HKALE Grades

Admission Figures	UE	CLC	AL-1	AL-2	AL-3	AS-1	AS-2	AS-3
75th Percentile	D	B	A	A	B			
50th Percentile	D	E	B	B		A	B	
25th Percentile	D	D	B	C	C			

HKCEE Grades

Admission Figures	ENG	CHI	Subj. 1	Subj. 2	Subj. 3	Subj. 4	Subj. 5	Subj. 6	Subj. 7	Subj. 8
75th Percentile	3	3	A	A	A	A	C	D		
50th Percentile	3	2	A	A	B	B	B	B		
25th Percentile	3	3	A	A	B	C	C			

Quantitative Finance and Risk Management Science 計量金融學及風險管理科學

HKALE Grades

Admission Figures	UE	CLC	AL-1	AL-2	AL-3	AS-1	AS-2	AS-3
75th Percentile	B	B	A	A	A			
50th Percentile	C	A	A	A	B			
25th Percentile	C	C	A	A	A			

HKCEE Grades

Admission Figures	ENG	CHI	Subj. 1	Subj. 2	Subj. 3	Subj. 4	Subj. 5	Subj. 6	Subj. 7	Subj. 8
75th Percentile	5	5	A	A	A	A	B	B		
50th Percentile	4	5	A	A	A	A	A	B	B	C
25th Percentile	4	3	A	A	A	A	A	A		

Risk Management Science 風險管理科學

HKALE Grades

Admission Figures	UE	CLC	AL-1	AL-2	AL-3	AS-1	AS-2	AS-3
75th Percentile	C	B	A	A	B			
50th Percentile	C	A	A	B	D			
25th Percentile	D	D	A	A	A			

HKCEE Grades

Admission Figures	ENG	CHI	Subj. 1	Subj. 2	Subj. 3	Subj. 4	Subj. 5	Subj. 6	Subj. 7	Subj. 8
75th Percentile	5	5	A	A	A	A	A	B		
50th Percentile	5	5	A	B	B	B	B	B		
25th Percentile	4	4	A	A	A	A	B			

Statistics 統計學

HKALE Grades

Admission Figures	UE	CLC	AL-1	AL-2	AL-3	AS-1	AS-2	AS-3
75th Percentile	D	D	B	B	C			
50th Percentile	D	C	A	C	D			
25th Percentile	D	C	B	C	D			

HKCEE Grades

Admission Figures	ENG	CHI	Subj. 1	Subj. 2	Subj. 3	Subj. 4	Subj. 5	Subj. 6	Subj. 7	Subj. 8
75th Percentile	5	5	A	A	A	B	B	B		
50th Percentile	3	5	A	B	B	C	C			
25th Percentile	4	3	A	B	B	B	B	B		

Mathematics & Information Engineering 數學與信息工程學

HKALE Grades

Admission Figures	UE	CLC	AL-1	AL-2	AL-3	AS-1	AS-2	AS-3
75th Percentile	C	C	A	B	B	C		
50th Percentile	C	D	B	B	B			
25th Percentile	C	E	A	A	C	D		

HKCEE Grades

Admission Figures	ENG	CHI	Subj. 1	Subj. 2	Subj. 3	Subj. 4	Subj. 5	Subj. 6	Subj. 7	Subj. 8
75th Percentile	5	4	A	A	A	B	B	C	C	
50th Percentile	4	5	A	A	A	A	A	B		
25th Percentile	4	5	A	A	A	A	D	D	E	

Life Sciences 生命科學

(Including Biochemistry, Biology, Cell & Molecular Biology, Environmental Science, Food & Nutritional Sciences and Molecular Biotechnology)
(包括生物化學、生物、細胞及分子生物學、環境科學、食品及營養科學、分子生物技術學)

HKALE Grades

Admission Figures	UE	CLC	AL-1	AL-2	AL-3	AS-1	AS-2	AS-3
75th Percentile	C	B	B	B		D	D	
50th Percentile	C	D	B	C	D			
25th Percentile	D	D	B	C		C		

HKCEE Grades

Admission Figures	ENG	CHI	Subj. 1	Subj. 2	Subj. 3	Subj. 4	Subj. 5	Subj. 6	Subj. 7	Subj. 8
75th Percentile	5	5*	A	B	C	C	D			
50th Percentile	5	3	A	A	A	B	B	B		
25th Percentile	4	4	A	B	B	C	C	C		

Entrance Requirements (NSS / 2012)

The minimum eligibility to apply is 4 core and 1 elective subjects, with the minimum requirements for the 4 core subjects of Chinese Language, English Language, Mathematics, Liberal Studies at levels 3322 respectively. Programme-specific requirements are detailed below.

Programme	No of Electives	Specific Requirements		Other Additional Requirements
		Subject	Level	
Chemistry; Life Sciences (including Biochemistry; Biology; Cell and Molecular Biology; Environmental Science; Food and Nutritional Sciences; and Molecular Biotechnology); Mathematics; Physics; Statistics	1	*Option 1* Any one subject from the following: - Biology - Chemistry - Physics - Combined Science - Integrated Science	Level 3	Nil
		Option 2 Mathematics (Module 1 or 2)	Level 3	
		any one subject	Level 3	
Chinese Medicine	1	One of the following subjects: - Biology - Chemistry - Physics - Combined Science - Integrated Science	Level 3	Nil
Enrichment Mathematics	1	Mathematics	Level 4	Mathematics (Module 1 or 2) with Level 4 is required
		any one subject	Level 3	
Mathematics and Information Engineering	1	Mathematics	Level 4	Mathematics (Module 1 or 2) with Level 4 is required
		One of the following subjects: - Physics - Combined Science	Level 2	
Quantitative Finance and Risk Management Science	1	Mathematics	Level 3	Mathematics (Module 1 or 2) with Level 3 is required
		any one subject	Level 3	
Risk Management Science	1	Mathematics	Level 3	Mathematics (Module 1 or 2) with Level 3 is required
		any one subject	Level 3	

入學要求［三三四新學制 / 2012］

入學申請最低要求為四個核心科目另加一個選修科目。四個核心科目：中國語文、英國語文、數學及通識教育的最低等級要求分別為 3322。個別課程之最低入學條件詳見下表。

課程	選修科目總數	特定要求		其他附帶要求
		科目	等級	
化學 生命科學 (包括生物化學、生物、細胞及分子生物學、環境科學、食物及營養科學、分子生物技術) 數學 物理 統計學	1	選擇一 下列一科選修科目： - 生物 - 化學 - 物理 - 組合科學 - 綜合科學	第 3 級	無
		選擇二 數學科 (單元 1 或 2)	第 3 級	
		任何一科選修科目	第 3 級	
中醫學	1	下列一科選修科目： - 生物 - 化學 - 物理 - 組合科學 - 綜合科學	第 3 級	無
數學精研	1	數學	第 4 級	數學科 (單元 1 或 2) 第 4 級
		任何一科選修科目	第 3 級	
數學與信息工程學	1	數學	第 4 級	數學科 (單元 1 或 2) 第 4 級
		下列一科選修科目： - 物理 - 組合科學	第 2 級	
計量金融學及風險管理科學	1	數學	第 3 級	數學科 (單元 1 或 2) 第 3 級
		任何一科選修科目	第 3 級	
風險管理科學	1	數學	第 3 級	數學科 (單元 1 或 2) 第 3 級
		任何一科選修科目	第 3 級	

For the most complete and update information, please refer to the JUPAS website (www.jupas.edu.hk) and Office of Admissions and Financial Aid website (www.cuhk.edu.hk/adm).

所有入學資料以 JUPAS 網頁 (www.jupas.edu.hk) 及入學及學生資助處網頁 (www.cuhk.edu.hk/adm) 為準。

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