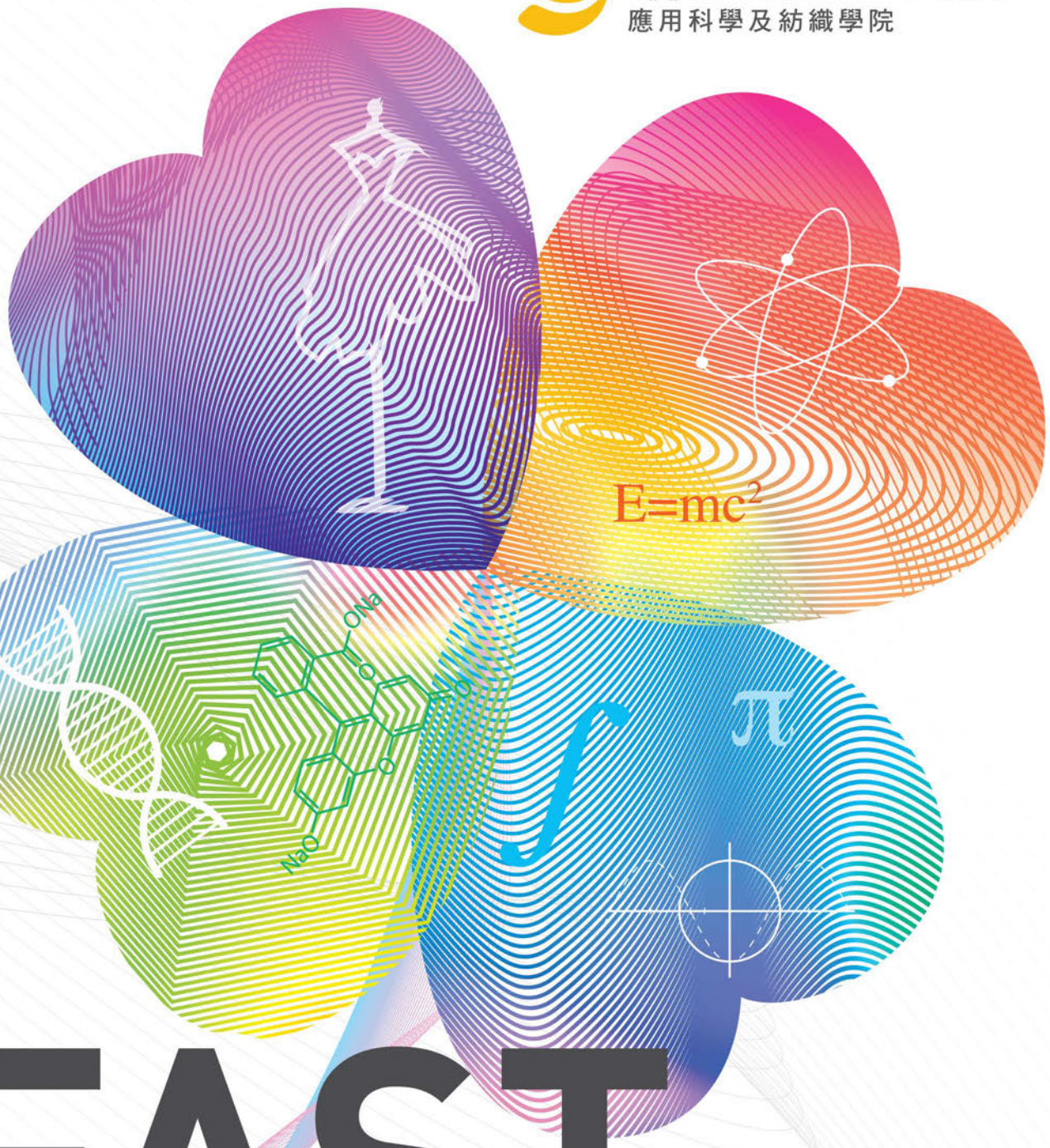
Faculty of
Applied Science & Textiles
應用科學及紡織學院



FAST

PROGRAMME GUIDE

FACULTY OF
APPLIED SCIENCE & TEXTILES

2019/20

" Our Departments have over

190 Academic Staff.

We offer
a comprehensive range of
academic programmes, covering

**Undergraduate,
Postgraduate
Degrees** and
Higher Diplomas."

Dean

Professor Wing-tak Wong
黃永德教授
Chair Professor of Chemical Technology
BSc, MPhil, PhD, ScD,
FRSC, CChem, CSc

Associate Deans

Professor Raymond Wai-yeung Wong
黃維揚教授
Chair Professor of Chemical Technology
BSc, PhD, CChem, FRSC,
President (Hong Kong Chemical Society)

Professor Man-sau Wong
黃文秀教授
BSc, PhD

Professor Kin-wing Kwok
郭建榮教授
BSc, MPhil, PhD

Our Departments have over 190 academic staff. We offer a comprehensive range of academic programmes, covering undergraduate, postgraduate degrees and higher diplomas. We have nearly 370 students pursuing MPhil and PhD by research and near 2,700 full-time and part-time students of taught postgraduate, undergraduate and sub-degree programmes.

We promote a vibrant and dynamic teaching and learning environment. Our emphasis is not only on knowledge and technological know-how, but also independent thinking and analytical ability. Our Departments employ an array of interactive methodologies to promote active learning, thereby fostering students' inquisitiveness and creativity. Our curricula are constantly updated to cater the broad spectrum of applied science and textiles, and the implementation of 4-year curriculum leads to a revamp of the academic programmes.

Consonant with the strategic objective of the University, our Departments integrate all-round development of students in the curricula. Exchange programmes, industrial placements/ internship and visits are very much part of our agenda. Students have opportunities to attach to visit universities in Mainland China, Australia, Korea, Germany, Finland, France, the US and the UK. Hundreds of our students also participate in various China experience activities each year. The exposure from sojourns of just weeks to an entire semester, is invaluable experience as confirmed by the students.

To foster the interests of secondary students towards the disciplines of applied science, we organized the Secondary School Mathematics and Science Competition in the past few years. This competition is one of the most significant Mathematics and Science competitions for the secondary schools. This year, we were thrilled to receive enthusiastic response from over 280 schools with nearly 11,000 entries to the four subjects of Biology, Chemistry, Physics and Mathematics. We further extended the footprint of the Competition to Mainland China this year. Over 800 students participated in the event held in seven cities, namely Beijing, Changchun, Chengdu, Hangzhou, Shenzhen, Wuhan and Xian. Top contestants from both Mainland China and Hong Kong were invited to Hong Kong to attend a PolyU Science Star Summer Camp consisting of cross-disciplinary lectures, workshops, study projects and tour visits.

Our high quality education is supported by the dedicated academic staff. They are committed to conduct scientific research work which underpins the teaching while instill in our students the scientific rigour and ethnics. Our Faculty has, in the past decade, fostered a dynamic research culture. Our research efforts are supported by well-equipped laboratories. Our research projects are funded by a variety of sources from the Competitive Earmarked Research Grant of the Government to collaborative contributions in the form of Innovation and Technology Fund and private donations from the industry. Over the years, our research teams have built the faculty's reputation for research of exceptional quality. The many innovations we have identified have earned international recognition/ awards and made proven value to the industries and the community as a whole.

DEPARTMENT of APPLIED BIOLOGY & CHEMICAL TECHNOLOGY

Head
Professor Samuel Lo
盧俊立教授
BSc, PhD

PROGRAMME	MODE OF STUDY	INTAKE NO.
MSc in Global Food Safety Management and Risk Analysis (12057)* ^ 環球食品安全管理及風險分析理學碩士學位	Mixed-mode	30
BSc(Hons) in Applied Biology with Biotechnology (JS3923) 應用生物兼生物科技(榮譽)理學士學位	Full-time	26
BSc(Hons) in Chemical Technology (JS3997) 化學科技(榮譽)理學士學位	Full-time	26
BSc(Hons) in Food Safety and Technology (JS3349) 食品科技與食物安全(榮譽)理學士學位	Full-time	26
BSc(Hons) in Analytical Sciences for Testing and Certification (12456) (Articulation Programme for Local Senior Year Admissions) 檢測及認證分析科學(榮譽)理學士學位	Full-time	32
Higher Diploma in Chemical Technology (JS3040) 化學科技高級文憑	Full-time	48

DEPARTMENT of APPLIED MATHEMATICS

Head
Professor Xiao-jun Chen
陳小君教授
Chair Professor of Applied Mathematics
BSc, MSc, PhD

PROGRAMME	MODE OF STUDY	INTAKE NO.
MSc in Applied Mathematics for Science and Technology (63022)* 科技應用數學理學碩士學位		60
• Specialism in Actuarial and Investment Science 精算及投資科學專業	Full-time	
• Specialism in Decision Science 決策科學專業	Part-time	
MSc in Operational Research and Risk Analysis (63024)* 運籌及風險分析理學碩士學位	Mixed-mode	60
BSc(Hons) in Investment Science and Finance Analytics (JS3806) ^ 投資科學及金融分析(榮譽)理學士學位	Full-time	19
BSc(Hons) in Data Science and Analytics (63425) (Articulation Programme for Local Senior Year Admissions) 數據科學及分析(榮譽)理學士學位	Full-time	25

DEPARTMENT of APPLIED PHYSICS

Head
Professor Daniel Lau
劉樹平教授
BSc, PhD

PROGRAMME	MODE OF STUDY	INTAKE NO.
BSc(Hons) in Engineering Physics (JS3985) 工程物理學(榮譽)理學士學位	Full-time	25
• Specialism in Optoelectronics 光電子學專業		
Higher Diploma in Applied Physics (JS3014) 應用物理學高級文憑	Full-time	51

INSTITUTE of TEXTILES & CLOTHING

Head
Professor Jintu Fan
范金土教授
Chair Professor of Fiber Science & Apparel Engineering
DSc, PhD, Hon. FTI, FRSA

PROGRAMME	MODE OF STUDY	INTAKE NO.
MA in Fashion and Textile Design (14097)* 服裝及紡織品設計文學碩士學位	Full-time	26
MA in Fashion and Textiles (14102)* 服裝及紡織文學碩士學位	Mixed-mode	50
• Specialism in Fashion Merchandising 服裝營銷策劃專業		
• Specialism in Global Fashion Management 全球化服裝管理專業		
BA(Hons) Scheme in Fashion and Textiles (JS3492) 服裝及紡織(榮譽)文學士學位組合課程	Full-time	92
• Specialism in Technology 科技專業		
• Specialism in Design 設計專業		
• Specialism in Retail & Marketing 零售及市場學專業		
• Specialism in Intimate Apparel & Activewear 內衣及運動服裝專業		
• Specialism in Knitwear Design & Technology 針織時裝設計及科技專業		

^ This programme is offered subject to approval.

* This programme is not government-funded; it is offered on self-financed basis.

The leaflet was compiled in August 2018. Applicants are advised to visit Academic Secretariat website www.polyu.edu.hk/study for latest information including admission score calculation mechanism.

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PolyUFAST

THE HONG KONG POLYTECHNIC UNIVERSITY
香港理工大學

Faculty of
Applied Science & Textiles
應用科學及紡織學院

ABCT

PROGRAMME GUIDE

DEPARTMENT OF
APPLIED BIOLOGY AND CHEMICAL TECHNOLOGY

2019/20

ABOUT THE DEPARTMENT

Our Department has brought together the expertises in molecular biology; biotechnology; biochemistry proteomics, cancer biology; bioimaging, biofuel, physiology; organic and inorganic chemistry, analytical chemistry, chemical engineering, nanotechnology and food science/ technology.

We are poised for high level research and consultancy projects which require diverse expertise and interdisciplinary knowledge.

Summer Workshop "A Miracle Journey of Modern Science Applications", 2018

Our programmes emphasize both theories and applications. Multimedia and web-based teaching materials are often adopted to enhance learning efficiency. Our experienced staff are highly qualified and most of them received training from renowned overseas institutions. We strongly encourage our students to take part in summer placements to gain real-life work experience. We also maintain a close relationship with secondary schools. Our one-day summer workshop, covering areas in DNA, Chemical Technology, and Food Safety and Technology, are well received by secondary students in these few years.

In the research arenas, our current focuses are on drug development/ synthesis and food safety. The Department has established research platforms in these disciplines for transferring our research outputs to applications. Our efforts lead to very impressive output, usually in patents and publications in international journals. We collaborate with industries through consultancy activities and government-funded projects. The Department also organizes regular seminars, public lectures, symposia and professional courses to bring the updated knowledge and technologies to the public.

RESEARCH

Major Research Areas

- New Materials and Nanotechnology
- Drug Discovery and Traditional Chinese Medicine
- Cancer Research
- Organometallic Chemistry and Catalysis
- Renewable Energy and Sustainable Development
- Chemical Imaging and Biosensing
- Food Safety and Technology

Our Department is one of the few science departments in Hong Kong with chemists and biologists working side-by-side. The result is the creation of a dynamic, exciting and challenging atmosphere for our staff and students. With our research expertise in many diverse fields and a large collection of sophisticated and versatile equipment, we have great strength for developing and coordinating strategic/ applied research and multidisciplinary consultancy projects.

Our Research Platforms

The Department has established platforms in various research disciplines for transferring our research outputs to applications.

State Key Laboratory of Chirosciences
手性科學國家重點實驗室

Succeeding the support of the University Grants Council (UGC) under the Area of Excellence (AoE) scheme for establishing the "Institute of Molecular Technology for Drug Discovery and Synthesis" in 2001, the University received the recognition from the Chinese government for setting up the "State Key Laboratory of Chirosciences" on PolyU campus in 2010. This State Key Laboratory (SKL) focuses on the advancement of technologies in synthesis and catalysis in developing novel drugs and other applications.

State Key Laboratory of Chinese Medicine and Molecular Pharmacology (Incubation)
中藥藥學及分子藥理學研究重點實驗室 (國家重點實驗室培育基地)

The State Key Laboratory of Chinese Medicine and Molecular Pharmacology (Incubation), Shenzhen (SKL Incubation) under The Hong Kong Polytechnic University Shenzhen Research Institute is a laboratory focusing on the chemistry and pharmacology of Chinese medicine. Located at the Shenzhen Hi-tech Industrial Park, SKL Incubation is equipped with state-of-the-art equipment in various functional laboratories for the pre-clinical studies of drugs or health food.

Shenzhen Key Laboratory of Food Biological Safety Control
深圳食品生物污染與控制重點實驗室

In January 2015, Shenzhen Key Laboratory for Food Biological Safety Control was established with a mission to meet the specific needs in food safety of the Pearl River Delta region, especially Shenzhen and Hong Kong. Major focuses are on food biological safety risk assessment, fast detection technologies development plus food packaging and preservation technology development. As a platform for facilitating knowledge exchange, this laboratory is well poised to further strengthen the collaboration with other research institutes in Mainland China, thereby nurturing more professionals for further contribution to the technological development in Hong Kong and Mainland China.

Lo Ka Chung Research Centre for Natural Anti-Cancer Drug Development
盧家聰天然抗癌藥物研發中心

The Lo Ka Chung Research Centre for Natural Anti-Cancer Drug Development was established on campus in 2006. It strives for pioneering research in natural anti-cancer drugs, and it also carries the mission of educating the public through trainings co-organized with pharmaceutical companies. Throughout the years, the centre has successfully developed two novel drugs to treat cancer. The first drug (BCT-100) shows encouraging results in the formal phase I/II clinical trials at Queen Mary Hospital in treating liver cancer. The second drug (BCA-PEG20) represents a new paradigm for treating various cancer types. With application of the most advanced biotechnology, these new drugs create opportunities for treating cancers.

Food Safety and Technology Research Centre
食物安全及科技研究中心

In light of the growing public concern about food safety and related standards in the regional areas, the University established the Food Safety and Technology Research Centre in 2011. With a wealth of professional expertise in the field and state-of-the-art equipment, FSTRC aims to serve as a platform for fostering local and international collaborations on food safety research. The centre has set different laboratories in three locations, including PolyU campus, Hong Kong Science and Technology Park and PolyU Shenzhen Base in Nanshan District High-Tech Industrial Park, to accommodate the needs of education, consultancy and collaborative research. Carrying the mission of promoting food safety to the public, the Centre has also offered professional training (Hygiene Manager Training Course) to the practitioners of the industry.

Our Research Awards in Recent Years

Our faculty staff have received various prestigious research awards worldwide, including Second Class Prize in Natural Science Award (2013, 2014, 2015) and Second Class Prize in Scientific and Technological Progress Award (2014) bestowed by the Ministry of Education of China.

International Exhibition of Inventions of Geneva

The remarkable performance of our faculty staff received recognitions in the International Exhibition of Inventions of Geneva annually. The award winning projects are listed as follows:

- Grand Prize and Gold Medal, 2015 – "Catalyst for Green Biodiesel Production from Unrefined Feedstock"
- Gold Medal and Special Award, 2014 – "Preparation of Food Grade Capsules with Targeted Drug Delivery"
- Gold Medal and Special Award, 2013 – "Novel Flavonoid Dimers for Reversing Cancer Drug Resistance"
- Gold Medal and Special Award, 2012 – "Preparation of Selenium Nanoparticles with Strong Anti-tumor Activity Using Tiger Milk Mushroom"
- Gold Medal, 2012 – "A Novel QPAR Technique for Extracting Valuable Information from Herbal Medicines"
- Gold Medal, 2011 – "Portable Real-time DNA Biosensor"

Grand Prize and Gold Medal awarded at 43rd International Exhibition of Inventions of Geneva, 2015

Distinguished Knowledge Transfer Awards (Technological Excellence) - Merit Award, 2017

PolyU celebrated the Second Inauguration of Endowed Professorships, 2015

Asian Core Programme Lectureship Award

The Asian Core Programme (ACP) aims to create world-class research hubs within the Asian region, and members of the organic chemistry network are striving to initiate international collaboration and interaction in cutting-edge fields of research. Our researchers have received recognitions from various participated regions, namely Japan (2011, 2012, 2013, 2016), Singapore (2011), China (2012, 2014, 2015), Taiwan (2016), Thailand (2012, 2014, 2015) and Korea (2013, 2016), for their remarkable performance and presentation in consecutive years.

Other Research Awards

Our researchers have received numerous awards on various occasions including the Distinguished Knowledge Transfer Awards (Technological Excellence) - Merit Award (2017), the Croucher Senior Research Fellowship Award (2013), awards from the 2nd World Inventor Award Festival (2013), and the Rising Star at the 41st International Conference on Coordination Chemistry (2014). This greatly boosts spirit of the Department for further developing cutting-edge applied technologies for the benefit of the community.

Some Research Statistics

No. of research students :	22 (MPhil) 79 (PhD)
No. of on-going projects :	225
No. of papers in refereed journals : (2016/17)	107

STUDENT ACTIVITIES & PROFESSIONAL RECOGNITION

Student Activities

To extend our student's learning experience beyond the classroom, and to enhance their all-round development, we provide them the following opportunities:

Chemistry Olympiad

This is an annual competition jointly organized by the Hong Kong Chemical Society and the Royal Society of Chemistry for chemistry students of six tertiary institutions to promote interest in chemistry. Students of our chemical technology programmes have taken part in the event since it was first launched in 1989. They have found it a fun way to develop their analytical and problem-solving abilities and communication skills. Students participated actively in the competition and obtained championship in 1990, 2004, and 2010, First Runner up in 1989, 1998, and 1999.

Our PolyU chemistry team won the 2nd runner-up at the 25th Hong Kong Chemistry Olympiad for tertiary institution (2014)

Summer Placements and Exchange Programmes

We have been arranging students for placement or attachment at institutions in Austria, Canada, Denmark, Norway, UK, Greece, Czech Republic, Japan, Korea, Singapore, U.S.A., and Mainland China for summer training. The overseas experience broaden students' horizons, not only in their professional knowledge but also in their global outlook and cultural appreciation. Those who prefer local experience would be placed in the commercial or industrial sectors in Hong Kong.

Starting from 2011, our Department has organized joint summer internship programmes with Guangzhou and Shenzhen Customs District P.R. China (Former GD/SZ Entry-Exit Inspection and Quarantine Bureau). Under this internship scheme, about 18 students will join the bureaus' laboratories in Guangdong or Shenzhen for six to eight weeks where they can accumulate valuable frontline food testing experience at the government body.

Graduates of our Summer Internship Programme 2014 in Guangdong Entry-exit Inspection and Quarantine Bureau (廣東出入境檢驗檢疫局)

Industrial Visits

The Department has been organizing industrial visits in Hong Kong and in the Mainland China to provide students with first-hand experience in industrial operations and familiarize them with the environment of the workplace.

Professional Recognition

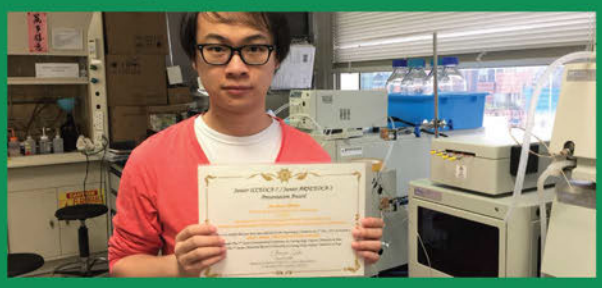
Graduates of our BSc(Hons) in Applied Biology with Biotechnology are qualified for membership of the Royal Society of Biology (RSB) in the UK.

Graduates of our BSc(Hons) in Chemical Technology are qualified for full membership of the Hong Kong Chemical Society and the American Chemical Society, and recognized by the Royal Society of Chemistry (RSC) for admission as Associate Members (AMRSC).

Our BSc(Hons) in Food Safety and Technology programme is accredited by the Institute of Food Technologists (IFT) and the International Union of Food Science and Technology (IUFoST). Graduates with 3 years of work experience in the food safety/ technology area are able to obtain IFT and IUFoST Professional Memberships. Graduates are qualified for Hygiene Manager of FEHD and will obtain HACCP qualification for Food Manufacturing by Chartered Institute of Environmental Health (CIEH) upon graduation. Students enrolled in the programme are eligible for IFT undergraduate scholarships.

Other Student Awards on Research

Our students have also taken part in and won awards from various research symposia and conferences, including the Best Poster Oral Award and Travel Awards in Liver Week (2017, 2018), Best Oral Presentation Award in the 7th Junior International Conference on Cutting-edge Organic Chemistry in Asia (2017), Best Poster Award and Oral Presentation Award at the 24th Symposium on Chemistry Postgraduate Research in Hong Kong (2017), Best Daeson-Hughes Poster Award in 10th International Symposium on Nutritional Aspects of Osteoporosis (2017), Best Poster Award in Life Science (2nd Prize) at the Sunney and Irene Chan Lecture in Chemical Biology (2017) and Champion in Oral Presentation in the 23rd Symposium on Chemistry Postgraduate Research in Hong Kong (2016).



ABCT MPhil student received the Best Oral Presentation Award in the 7th Junior International Conference on Cutting-edge Organic Chemistry in Asia (Junior ICCEOCA-7) in 2017

Graduates of our Summer Internship Programme 2016 in Shenzhen Entry-exit Inspection and Quarantine Bureau (深圳出入境檢驗檢疫局)

MESSAGES FROM ALUMNI

The education I received in the Department of Applied Biology and Chemical Technology equipped me with necessary theoretical knowledge and practical skills in the field of biology. As the ABB programme is relatively small, we were able to develop close relationships with each other and with professors, who not only pass on knowledge but also provide us many excellent opportunities, such as having summer internship at top universities around the world. I was fortunate to be selected to join a summer internship programme at Harvard University in my third year, which reinforced a major lesson we all learned at ABCT: it is not necessary to be a genius to succeed - passion and hard work contribute significantly. As an added benefit, the Department provides access to external consultants who run tailored workshops to help students achieve their career goals. I am very grateful for the effort made by our Department and professors toward ensuring our success in the future. I would express heartfelt thanks to PolyU for laying a solid academic foundation for me: **If I were to choose again, I would, without question, choose the same major in PolyU.**

HE Yi

BSc(Hons) in Applied Biology with Biotechnology
(Graduate of 2018 with First Class Honours)

CHOW Yip Chi

Higher Diploma in Chemical Technology
(Graduate of 2017)

As a fresh graduate of the Higher Diploma in Chemical Technology (HDCT), I would love to take this opportunity to thank my department for offering this well-designed and practical programme. The curriculum of HDCT includes different aspects of chemistry, for example, organic chemistry, analytical chemistry and physical chemistry; and there are both the theoretical and application components, the latter of which includes application of chemistry in solving our environmental problems and synthesis of polymers. I will also become a freshman of BSc(Hons) in Chemical Technology programme at the PolyU. After graduating from HDCT, there is also opportunity for pursuing further study. Finally, I would like to express my gratitude to all the staff members of ABCT and FAST for their support in the last two years.

TANG Mei Fen Mavis

BSc(Hons) in Chemical Technology
(Graduate of 2018)

My four-year university degree experience as a student of Chemistry has been rewarding. Students are constantly challenged by the design of the study, and by a diverse range of coursework from fundamental subjects to some advanced electives where you get to delve deeper into different subfields of chemistry.

I can still recall my time spent in the inorganic chemistry laboratory where my partner and I worked together to conduct experiments as part of the course work. We were asked to plan our own schedule and finish the work in 10 lab sessions. Our ability to complete all the experiments in limited time gave me enormous satisfaction. I had a chance to put my learning into a real test, and got a taste of the real world where not everything was ideal.

GOH Zhen Hao, Jacky

BSc(Hons) in Food Safety and Technology
(Graduate of 2016 with First Class Honours)

As a graduate of the Food Safety and Technology programme in the ABCT Department, I was grateful for the various opportunities that I had gained for my all-round development. The programme offered not only a wide range of courses on food science, but also provided me with various extra-curricular activities. As President of the 4th Food Safety and Technology Students' Society, I built up independence and leadership skills during my tenure. This developed my outgoing personality that further rendered my overseas learning experience. Thanks to the assistance from my Department, I acquired prestigious learning opportunities during my exchange in Stanford University in the U.S., and I explored my interest in the research field during my internship in Lodz University of Technology in Poland. These activities greatly broadened my horizons and prepared me for my future career. As such, I would like to express my sincerest gratitude to the department that made my university life meaningful.

DEPARTMENT OF APPLIED BIOLOGY AND CHEMICAL TECHNOLOGY

MSc in Global Food Safety Management and Risk Analysis

環球食品安全管理及風險分析理學碩士學位

PROGRAMME CODE
12057

PROGRAMME LEADER
Dr Ka Hing Wong
黃家興博士
BSc, MPhil, PhD

PROFESSOR & HEAD
Prof. Samuel Lo
盧俊立教授
BSc, PhD

NORMAL DURATION
1 year

CREDITS REQUIRED FOR GRADUATION
30 credits

TYPE OF FUNDING
Self-financed

MODE OF STUDY
Mixed-mode

INTAKE QUOTA
30

Programme Aims & Characteristics

- To provide a unique and professional oriented training on global food safety management and risk analysis for science/ technology graduates who want to develop their expertise in the area of food safety
- To provide students with advanced knowledge in the major and newly emerging hazards affecting food safety from a global perspective

Programme Structure

Students studying for MSc in Global Food Safety Management and Risk Analysis would need to complete:

- Food Safety Risk Analysis
- Global Food Safety Management
- Food Safety in Action
- International Food Standards, Laws and Regulations
- Foodborne Chemical and Microbial Hazards: Case Studies
- Global Food Security
- Capstone Project

Programme Highlights

- Graduates are qualified to obtain official certificates on Risk Analysis Core Package issued by Joint Institute for Food Safety and Applied Nutrition (JIFSAN) and PolyU. JIFSAN is a Center of Excellence jointly formed by United States Food and Drug Administration (USFDA) and The University of Maryland (UMD)
- Graduates are also qualified for a certificate on ISO22000 issued by an accredited Certification Body
- The programme will be jointly taught by academics, experts and experienced practitioners in the field of food safety from all over the world

THE HONG KONG POLYTECHNIC UNIVERSITY
香港理工大學

DEPARTMENT OF APPLIED BIOLOGY AND CHEMICAL TECHNOLOGY
應用生物及化學科技學系

Entrance Requirements

- Bachelor's degree with an Honours in food safety, food science, food technology, public health or food industry management or other relevant science disciplines

Career Prospects

Excellent job prospects particularly in food, health and agricultural industries, related government agencies and research institutes in Hong Kong, Mainland China and the region are available to graduates.

English Language Requirement

For applicants who are not native English speakers or whose first degree qualifications are not obtained through English medium, they are required to obtain one of the following:

- A TOEFL score of 550 or above for the paper-based test, OR a score of 80 or above for the Internet-based test; OR
- An overall Band Score of at least 6 in the International English Language Testing System (IELTS)

The aforementioned qualifications are by no means exhaustive. The Department has the full discretion to accept other English qualifications as deemed equivalent to admitting applicants to our programme.

Tuition Fee

About HK$160,000 per programme

Important : This leaflet was compiled in August 2018. Applicants are advised to visit Academic Secretariat website www.polyu.edu.hk/study for the latest information.

This programme is offered subject to approval.

Enquiry 查詢詳情

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DEPARTMENT OF APPLIED BIOLOGY AND CHEMICAL TECHNOLOGY

HD in Chemical Technology
化學科技高級文憑

PROGRAMME CODE
12352

JUPAS CODE
JS3040

PROGRAMME LEADER
Dr Gary Kwong-chak Cheung
張光澤博士
BSc, PhD

PROFESSOR & HEAD
Prof. Samuel Lo
盧俊立教授
BSc, PhD

NORMAL DURATION
2 years

CREDITS REQUIRED FOR GRADUATION
At least 60 credits (depending on student's HKDSE attainment)

TYPE OF FUNDING
Government-funded

MODE OF STUDY
Full-time

INTAKE QUOTA
48


Practical training for students

Programme Aims & Characteristics

The Higher Diploma programme in Chemical Technology addresses the increasing demand of industry and commerce for multi-skilled graduates. The programme provides training in applied chemistry in combination with chemical engineering principles. The programme, which is highly relevant to the needs of Hong Kong and neighbouring regions, offers a number of supporting studies to equip our graduates with skills in communication.

Our staff's commitment to quality teaching and research means that you will gain quality education and a reputable qualification. It is no wonder that our graduates are much sought after by industry and commerce.

課程宗旨與特色

本課程為工商界培育多技能人才，同時亦為學生提供香港和鄰近地區所需的應用化學和化學工程的知識和技能。畢業生除了學到化學科技的知識，亦能掌握語言及文字溝通等輔助技能，為升學及就業打好基礎。

本系的教職員悉心為學生提供優質的教學並熱心於科研。學生將會獲得優良的教育和得到一個良好的資歷。本課程的畢業生一向廣受工商界歡迎和認可。

Programme Structure & Content

The Higher Diploma is a 2-year, full-time programme emphasizing both theory and practice to enable students to work independently with motivation, obtain analytical ability, and think creatively. Students are required to complete at least 15 credits of the General University Requirements (GUR) and 45 credits of Major Study Requirement.

GUR includes language requirements and broadening subjects (which is known as Clustered Area Requirements).

Major Study Requirement is shown as follows :

Discipline-specific Core Subjects (45 Credits)

Subjects	No. of Credits	
Calculus and Linear Algebra*	微積分與線性代數	3
Basic Statistics*	基本統計學	2
University Physics I#	大學物理 I	3
General Biology#	普通生物學	3
General Laboratory Techniques and Safety	普通實驗技巧與安全	3
General Chemistry I#	普通化學 I	3
General Chemistry II	普通化學 II	3
Analytical Chemistry I	分析化學 I	3
Analytical Chemistry II	分析化學 II	3
Analytical Chemistry II Laboratory	分析化學實驗 II	1

Discipline-specific Core Subjects (45 Credits)

Subjects		No. of Credits
Introductory Physical Chemistry	初級物理化學	2
Chemistry Laboratory I	化學實驗 I	1
Chemistry Laboratory II	化學實驗 II	2
Organic Chemistry I	有機化學 I	3
Applied Chemistry – Polymer	應用化學 : 聚合物	3
Applied Chemistry – Environmental Chemistry	應用化學 : 環境化學	3
Applied Chemistry Laboratory	應用化學實驗	2
English for Scientific Communication		2

Footnotes :

* Students who have NOT attained level 2 or above in the Extended Module M1 or M2 in HKDSE Mathematics are required to complete Basic Mathematics - an introduction to Algebra and Differential Calculus in Semester 1 before they can register for Basic Statistics and Calculus & Linear Algebra.

\# Students who have NOT attained level 3 or above in HKDSE in :

a Chemistry or Combined Science with Chemistry will need to complete Introduction to Chemistry;

b Biology or Combined Science with Biology will need to complete Introductory Life Science;

c Physics or Combined Science with Physics will need to complete Introduction to Physics.

Career Prospects & Further Studies

With our Higher Diploma in Chemical Technology, you have a wide range of careers open to you :

- Production
- Quality Control
- Marketing and Sales
- Waste Treatment
- Environmental Management
- Research and Development

The programme prepares you to be a well-trained technician/ technologist/ salesperson in industry, commerce and public service. It also provides an excellent basis for further studies at degree level. A high proportion of our graduates have been admitted to local and overseas universities for degree studies, including BSc(Hons) Chemical Technology and other degree programmes offered by our Department.

Entrance Requirements

Satisfy the University's General Entrance Requirements of 5 HKDSE subjects at Level 2 including English Language and Chinese Language.

There is no compulsory subject requirement.

Satisfactory performance in any of the preferred subjects will have a positive influence on admission selection. However, applicants who have not taken any of the preferred subjects will still be considered for admission but they may need to take relevant underpinning subjects after admission to PolyU to gain necessary foundation knowledge.

The following relevant Applied Learning subjects (with a maximum of 2) can be accepted to meet the entrance requirement of the programme:

- Environmental Engineering
- Events Planning and Operation
- Exercise Science and Health Fitness
- Fundamental Health Care
- Foundation in Chinese Medicine
- Health and Beauty Keeping in TCM
- Health Care Practice
- Medical Laboratory Science

Preferred subjects with the Highest Weighting

The highest weighting in the calculation of admission scores is given for the following subjects :

- Chemistry
- Physics
- Combined Science with Chemistry or Physics

Important : The leaflet was compiled in August 2018. Applicants are advised to visit Academic Secretariat website www.polyu.edu.hk/study for the latest information including admission score calculation mechanism.

Enquiry 查詢詳情

MS CAROL TSANG
Tel 電話 3400 8689
Email 電郵 carol.tsang@polyu.edu.hk

URL 網址 www.polyu.edu.hk/abct

About the Department
有關本學系

The Department has highly qualified staff who are committed to quality teaching and research. Our laboratories are equipped with state-of-the-art facilities for the students to perform their project work.

Excellent links are maintained with industry and commerce not only through contract research and consultancy services, but also through former graduates. We promote exchange of ideas with guest speakers from universities and institutions all over the world.

Research Activities
科技研究活動

The Department is active in chemical research and product developments (R&D). We conduct major research projects in the development of new drugs, and have established a large-scale research centre in Chinese medicine in Shenzhen.

Advanced mass spectrometer for protein analysis

Please visit our website for success stories of graduates

Discipline-specific Core Subjects (70 Credits)

Subjects		No. of Credits
English for Scientific Communication		2
Chinese Communication for Science Professionals	專業中文傳意(科學)	2
Calculus and Linear Algebra*	微積分與線性代數	3
Basic Statistics*	基本統計學	2
University Physics I#	大學物理 I	3
General Biology#	普通生物學	3
General Laboratory Techniques and Safety	普通實驗技巧與安全	3
General Chemistry I#	普通化學I	3
General Chemistry II	普通化學II	3
Introductory Cell Biology and Biochemistry	生物化學	3
Analytical Chemistry I	分析化學 I	3
Analytical Chemistry II	分析化學 II	3
Analytical Chemistry II Laboratory	分析化學實驗 II	1
Introductory Physical Chemistry	初級物理化學	2
Intermediate Physical Chemistry	中級物理化學	3
Chemistry Laboratory I	化學實驗 I	1
Chemistry Laboratory II	化學實驗 II	2
Organic Chemistry I	有機化學 I	3
Organic Chemistry II	有機化學 II	3
Organic Chemistry II Laboratory	有機化學實驗 II	2
Inorganic Chemistry I	無機化學 I	3
Inorganic Chemistry II	無機化學 II	3
Inorganic Chemistry II Laboratory	無機化學實驗 II	2
Introduction to Chemical and Bioprocess Technology	化學及生物工程科技入門	3
Advanced Physical Chemistry	高級物理化學	2
Advanced Physical Chemistry Laboratory	高級物理化學實驗	1
Project/ Research Project	課題/研究課題	6

DEPARTMENT OF APPLIED BIOLOGY AND CHEMICAL TECHNOLOGY

BSc (Hons) in Chemical Technology

化學科技(榮譽)理學士學位

PROGRAMME CODE
12447

JUPAS CODE
JS3997

PROGRAMME LEADER
Dr Daniel Kam-wah Mok
莫錦華博士
BSc, PhD

PROFESSOR & HEAD
Prof. Samuel Lo
盧俊立教授
BSc, PhD

NORMAL DURATION
4 years

CREDITS REQUIRED FOR GRADUATION
At least 121 credits (depending on student's HKDSE attainment)

TYPE OF FUNDING
Government-funded

MODE OF STUDY
Full-time

INTAKE QUOTA
26

Uniqueness of Our Programme

The BSc(Hons) degree programme in Chemical Technology recognises the increasing demand of industry and commerce for multi-skilled professionals. It emphasizes the applied, technological and commercial aspects of chemistry. The programme offers a number of carefully selected supporting studies to equip our graduates with skills in communication, information technology and quality control. The emphasis on the application of chemistry makes our programme unique and different from 'pure' chemistry programmes offered by other universities.

In addition to quality education, we provide a friendly and stimulating learning environment. We have a personalized consultation system to take care of student's needs. Extra-curricular activities including industrial visits, summer job trainings and placements in local and overseas companies and universities would allow students to gain work experience and social skills. Job-searching assistance is also provided for our graduating students.

Student exchange out in the University of Southampton

Programme Structure

In the 4-year curriculum, all students should complete 30 credits of General University Requirements (GUR) and 91 credits of Discipline Specific Requirements (DSR).

GUR (30 credits) includes language requirements, Leadership and Intra-personal Development, Service-learning, broadening subjects (which is known as Clustered Area Requirements). DSR (91 credits) encompasses of 70 core credits and 21 elective credits.

Graduation photo of BScCT students

Career Prospects

Graduates are able to pursue careers in industry, business or the public sector. Our graduates work as chemists, technologists, and chemical and/ or biochemical process engineers. Employment opportunities abound in industries, such as plastics and toys, cosmetics and fragrances, drugs and pharmaceuticals, pollution control and the manufacture of printed circuit boards. Graduates can also pursue openings in sales and marketing, or as management executives in various fields.

Graduates are qualified as chemical analysts or environmental protection officers for the government or public utilities. Teaching chemistry in secondary schools is another possibility. Graduates who wish to pursue further studies have excellent opportunities both in Hong Kong and overseas.

Professional Recognition

Graduates are qualified for membership of the Hong Kong Chemical Society (HKCS), and the American Chemical Society as well as the Associate membership of the Royal Society of Chemistry (RSC) in the U.K.

ROYAL SOCIETY OF CHEMISTRY

Chemical Technology

WE ARE COMMITTED TO DELIVERING WORLD-CLASS EDUCATION AND PROTECTING THE ENVIRONMENT.

THE HONG KONG POLYTECHNIC UNIVERSITY
香港理工大學

DEPARTMENT OF APPLIED BIOLOGY AND CHEMICAL TECHNOLOGY
應用生物及化學科技學系

Modern laboratories for training students' instrumental techniques

Footnotes:

* Students who have NOT attained level 2 or above in the Extended Module M1 or M2 in HKDSE Mathematics are required to complete Basic Mathematics - an introduction to Algebra and Differential Calculus in Semester 1 before they can register for Basic Statistics and Calculus & Linear Algebra.

\# Students who have NOT attained level 3 or above in HKDSE in:

a Chemistry or Combined Science with Chemistry will need to complete Introduction to Chemistry;

b Biology or Combined Science with Biology will need to complete Introductory Life Science;

c Physics or Combined Science with Physics will need to complete Introduction to Physics.

Discipline-specific Elective Subjects (21 Credits)

Subjects		No. of Credits
Microbiology	微生物學	3
Environmental Science	環境科學	3
Food Chemistry	食物化學	3
Principles of Quality Assurance	品質保證原理	3
Polymer Chemistry and Nanotechnology	聚合物化學與納米科技	3
Polymer Laboratory	聚合物化學實驗	1
Industrial Electrochemistry	工業電化學	3
Industrial Electrochemistry Laboratory	工業電化學實驗	1
Advanced Analytical Techniques	高等分析技術	3
Advanced Analytical Techniques Laboratory	高等分析技術實驗	1
Food Processing Technology	食品加工科技	3
Pollution Control & Environmental Analysis	污染控制及環境評估	3
Pollution Control & Environmental Analysis Laboratory	污染控制及環境評估實驗	1
Medicinal Chemistry	藥物化學	3
Economic Analysis for Process Technology	工藝科技的經濟分析	3
Capstone Seminar in Analytical Chemistry		3
Chemical & Bioprocess Technology	化學及生物工程科技	3
Chemical & Bioprocess Technology Laboratory	化學及生物工程科技實驗	2
Natural Products Chemistry	天然產物化學	3
Organometallic Chemistry & Catalysis		3
Organometallic Chemistry & Catalysis Laboratory		1
Management & Organisation		3
Consumer Behaviour		3

Entrance Requirements

For Entry with HKDSE Qualifications:

Applicants must satisfy the General Entrance Requirements of The Hong Kong Polytechnic University :

- English Language : Level 3;
- Chinese Language : Level 3;
- Mathematics : Level 2;
- Liberal Studies : Level 2;
- Two elective subjects : Level 3.
  2nd elective can be M1/M2.

An attainment at Attained with Distinction (I) or above in one of the following Applied Learning subjects can be used for meeting the elective subject requirements:

- Environmental Engineering
- Event Planning and Operation
- Exercise Science and Health Fitness
- Fundamental Health Care
- Foundation in Chinese Medicine
- Health Care Practice
- Health and Beauty Keeping in TCM
- Medical Laboratory Science

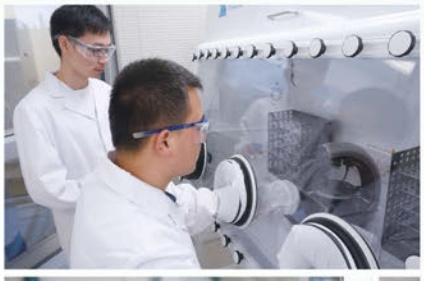
Preferred subjects with the Highest Weighting

The highest weighting in the calculation of admission scores is given for the following subjects:

- Chinese Language
- English Language
- Mathematics
- Extended Modules of Mathematics (M1/M2)
- Chemistry
- Physics
- Combined Science with Chemistry or Physics

* Interviews may be held after the announcement of HKDSE results.

Important : The leaflet was compiled in August 2018. Applicants are advised to visit Academic Secretariat website www.polyu.edu.hk/study for the latest information including admission score calculation mechanism.



Enquiry 查詢詳情

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Email 電郵 carol.tsang@polyu.edu.hk

URL 網址 www.polyu.edu.hk/abct

DEPARTMENT OF APPLIED BIOLOGY
AND CHEMICAL TECHNOLOGY

BSc (Hons) in Applied Biology with Biotechnology

應用生物兼生物科技(榮譽)理學士學位

PROGRAMME CODE
12451

JUPAS CODE
JS3923

PROGRAMME LEADER
Prof. Zhao Yanxiang
趙燕湘教授
BSc, PhD

PROFESSOR & HEAD
Prof. Samuel Lo
盧俊立教授
BSc, PhD

NORMAL DURATION
4 years

CREDITS REQUIRED FOR GRADUATION
At least 120 credits (depending on student's HKDSE attainment)

TYPE OF FUNDING
Government-funded

MODE OF STUDY
Full-time

INTAKE QUOTA
26

What is Biotechnology?

Biotechnology includes all different techniques that involve biological organisms or biological processes to manufacture desirable products or to serve human needs. Biotechnology is being applied in many different industries or service sectors and in many manufacturing processes. It is the most rapidly developing technological area in the twenty-first century and it is a multidisciplinary technology that integrates knowledge and techniques from biology, chemistry, physics, information technology, as well as other areas of science and technology.

About the Programme

BSc(Hons) in Applied Biology with Biotechnology aims to provide education and training to meet the high current and future demand for biotechnological professionals. The Hong Kong Polytechnic University launched BSc(Hons) in Applied Biology with Biotechnology programme in 1993 and it was the first biotechnology-related programme in Hong Kong. Since then, the programme is consistently one of the most popular science programmes in Hong Kong.

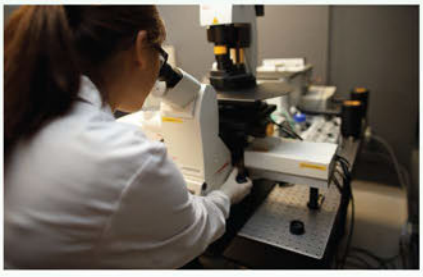
In this programme, academic knowledge and applications are both emphasized. Practical skills are just as important as theoretical concepts. In addition to learning activities within campus, students are strongly encouraged to expose themselves to industrial or research settings through internship and exchange programmes. These exposures will strengthen their practical skills and theoretical concepts, as well as to broaden their perspectives.

Real-time polymerase chain reaction

Career Prospects

Employment prospects for graduates of this programme are promising. Our graduates are working in different sectors and industries, both locally and overseas. For example, some of our graduates are developing their careers in the civil services, the biotechnology industry, scientific services, research institutes, food manufacturers and pharmaceutical companies.

Further study is another common pathway pursued by our graduates. The BSc(Hons) in Applied Biology with Biotechnology qualification is a Bachelor degree recognized by local and overseas universities. Every year, a number of our graduates further their academic pathway by pursuing their Master and Doctoral degrees in local or overseas universities.



Professional Recognition

Graduates are qualified for membership of the Royal Society of Biology (RSB) in the UK.

Royal Society of Biology
Accredited Degree

THE HONG KONG POLYTECHNIC UNIVERSITY
香港理工大學

DEPARTMENT OF APPLIED BIOLOGY AND CHEMICAL TECHNOLOGY
應用生物及化學科技學系

The Curriculum

In the 4-year programme, all students will be required to complete 30 credits of the General University Requirements (GUR) and 90 credits of the Discipline Specific Requirements (DSR). The GUR includes basic language requirements, leadership and personal development, service learning, and the Cluster-Area Requirements (CAR) as listed in Table 1 while the DSR includes basic science and mathematics subjects together with biotechnology subjects. There will also be room available for students to select free elective subjects of their own interest.

DSR for the first year of study will include General Biology, General Chemistry I and Basic Statistics. Students will also have to complete the General Laboratory Techniques and Safety subject in the first year as listed in Table 2. Students who do not have necessary background knowledge in science or mathematics subjects in their secondary school study will be required to complete the corresponding underpinning subjects in the first semester.

In Year 2 and 3, students will have to complete all compulsory DSR subjects as listed in Table 3. These include Human Physiology, Cell Biology, Microbiology, Biochemistry, Immunology, and DNA Technology.

In Year 3 and 4, students will have to complete a selection of elective DSR subjects. The choice of these DSR elective subjects may be made by a student according to his/ her own interest or career plan. These DSR elective subjects are listed in Table 4. In addition to these DSR elective subjects, students may also choose up to two elective subjects from outside the biotechnology discipline, for example subjects in information technology, chemical technology, food technology or even in business and marketing.

To complete the final stage of study, each student will have to complete a 6-credit capstone project.

Table 1:

General University Requirements (GUR)

Language and Communication Requirements (LCR)

Subjects to be taken will be determined by students' language proficiency at entry.

- English for University Studies I
- English for University Studies II
- Fundamentals of Chinese Communication

Broadening Subjects chosen from the following 4 Cluster-areas (CAR)

A minimum of 3 credits in each cluster; plus a minimum of 3 credits designated as "China-related"; and fulfilling the "Reading" and "Writing" requirements in Chinese and English.

- Human Nature, Relations and Development
- Community, Organization and Globalisation
- History, Cultures and World Views
- Science, Technology and Environment

Other Requirements

- Leadership and Intra-personal Development
- Service-Learning
- Freshman Seminar
- Healthy Lifestyle (non-credit bearing)

Table 2:

Compulsory Year 1 DSR Subjects

- Basic Statistics
- General Biology
- General Chemistry I
- General Laboratory Techniques and Safety

Table 3:

Other Compulsory DSR Subjects

- Biochemistry
- Biochemical Techniques
- Calculus and Linear Algebra
- Cell Biology
- Chinese Communication for Science Professionals
- Commercialization of Biotechnology Products
- DNA Technology
- English for Scientific Communication
- Experimental Approach in Molecular Biology and Biochemistry
- Human Physiology
- Immunology
- Introduction to Physics/ University Physics I
- Microbiology
- Molecular Biology
- Organic Chemistry

Table 4:

Elective DSR Subjects

- Advanced Molecular Biology
- Bio-data Processing and Analysis
- Bioinformatics
- Environmental Science
- General Chemistry II
- Immunotechnology
- Medicinal Chemistry
- Metabolism and Diseases
- Microbial Biotechnology
- Natural Products Chemistry
- Pharmacology of Drug Therapy
- Principles of Quality Assurance
- Protein Biotechnology
- Recent Developments in Medical Biotechnology

Entrance Requirements

For Entry with HKDSE Qualifications:

Applicants must satisfy the General Entrance Requirements of The Hong Kong Polytechnic University:

- English Language: Level 3;
- Chinese Language: Level 3;
- Mathematics: Level 2;
- Liberal Studies: Level 2;
- Two elective subjects: Level 3.
  2nd elective can be M1/M2.

Preferred Subjects with the Highest Weightings:

- English Language
- Chinese Language
- Mathematics
- Extended Modules of Mathematics (M1/M2)
- Biology
- Chemistry
- Combined Science with Biology or Chemistry

An attainment at Attained with Distinction (I) or above in one of the following Applied Learning subjects can be used for meeting the elective subject requirements:

- Child Development and Care
- Exercise Science and Health Fitness
- Fundamental Health Care
- Foundation in Chinese Medicine
- Health Care Practice
- Health and Beauty Keeping in TCM
- Medical Laboratory Science
- Sports Coaching and Management

Applicants may be required to attend an interview and interview will only be arranged for selected HKDSE applicants, if necessary.

Important : The leaflet was compiled in August 2018. Applicants are advised to visit Academic Secretariat website www.polyu.edu.hk/study for the latest information including admission score calculation mechanism.

Students receive practical training in modern laboratories

Enquiry 查詢詳情

MS CANDY LEUNG
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Email 電郵 bccandy@polyu.edu.hk

URL 網址 www.polyu.edu.hk/abct

DEPARTMENT OF APPLIED BIOLOGY AND CHEMICAL TECHNOLOGY

BSc (Hons) in Food Safety & Technology

食品科技與食物安全(榮譽)理學士學位

PROGRAMME CODE
12454

JUPAS CODE
JS3349

PROGRAMME LEADER
Dr Han-hua Liang
梁漢華博士
BSc, MSc, PhD

PROFESSOR & HEAD
Prof. Samuel Lo
盧俊立教授
BSc, PhD

NORMAL DURATION
4 years

CREDITS REQUIRED FOR GRADUATION
At least 122 credits (depending on student's HKDSE attainment)

TYPE OF FUNDING
Government-funded

MODE OF STUDY
Full-time

INTAKE QUOTA
26

Programme Aims & Characteristics

This full-time 4-year undergraduate government-funded degree study aims to provide a unique and profession-oriented education opportunity for HKDSE candidates/ graduates and produce well-trained food technologists as well as food safety officers for the needs and benefits of the community. The objective of the programme is to develop students into all-round graduates whose intellectual abilities, knowledge and skills are on a par with the international standards of an undergraduate degree in Food Safety and Technology. The ultimate goal is to contribute to the well-being of the Hong Kong society at large, in particular to its economy and the assurance of food safety in the community.

This programme is designed to meet the international undergraduate degree standards of both the Institute of Food Technologists (IFT) and the International Union of Food Science and Technology (IUFoST). It is an applied and practical programme with specially designed curriculum, modern learning/ teaching methodologies, multiple assessment tools, workplace learning experience and extra-curricular activities.

On successful completion of the programme, students should be able to start their careers in the food industry or pursue postgraduate studies. They can also utilize the skills and knowledge that they gain from the programme for personal career development, as well as for the benefit of the community and mankind in the future.

Taiwan Academic Visit 2015

課程宗旨與特色

本課程為適應香港社會需求而設立，有別於一般傳統全日學分制大專教育。其主要目的是為香港及其鄰近地區培訓一批近年急需的食物安全及食品科技專業人員。

本系擁有熱心教學和擅長研究的教授和導師，輔以嶄新的儀器與設備，整體課程設計更參照國際水準。教法以學生為本，除專業主修科目外，本課程對於學生個人成長的全面訓練尤其重視，藉以提升學生畢業後的競爭能力。學生畢業後，可投身食物及食品有關的行業工作，例如：食品工廠、政府部門、食物及食品化驗所、連鎖飲食集團、超市、酒店、伙食供應商、貿易進出口公司、教育及科研機構等。

我們設計這學士課程，希望能為學生增值，為促進社會的經濟繁榮及對食品/食品安全作出貢獻。歡迎有志於此的同學，以這課程為首選志願申請入讀！

Programme Structure & Content
課程結構與內容

This is a full-time programme for HKDSE graduates with a normal duration of four years. The programme is a credit-based and students are required to complete at least 122 credits worth of subjects, which include Compulsory and Elective Subjects in accordance with their own pace of study. In addition, all students will be required to complete 30 credits of General University Requirements (GUR) in which are the basic language requirements, leadership and personal development, service learning, Clustered Area Requirements, etc.

Common Underpinning Subjects for the Applied Sciences Broad Discipline

The underpinning subjects are for the students who may not have taken or attained Level 3 or above in the respective subjects in HKDSE.

International Conference on Global Food Safety and Antimicrobial Resistance in 2016

Discipline-specific Core Subjects (77-80 Credits)

Subjects		No. of Credits
English for Scientific Communication		2
Chinese Communication for Science Professionals	專業中文傳意(科學)	2
Calculus and Linear Algebra	微積分與線性代數	3
Basic Statistics	基本統計學	2
University Physics I	大學物理 I	3
General Chemistry I	普通化學I	3
General Laboratory Techniques and Safety	普通實驗技巧與安全	3
General Biology	普通生物學	3
Biochemistry	生物化學	3
Human Physiology	人類生理學	3
Microbiology	微生物學	3
Analytical Chemistry	分析化學	4
Organic Chemistry	有機化學	3
Raw Food Materials	食物原材料	3
Food Chemistry	食物化學	3
Elements of Food Engineering	食品工程學基礎	3
Food Microbiology	食品微生物學	4
Sensory Evaluation of Food	食品感官評定	2
Food Toxicology	食物毒性學	2
Food Laws & Regulations	食品法例與規管	2
Principles of Nutrition	營養學原理	3
Food Processing I	食物加工 I	3
Food Analysis	食物分析	3
Food Processing II	食物加工 II	3
Food Processing Lab	食物加工實驗	1
Sanitation and Food Hygiene Management	環境及食物衛生管理	2
Quality & Food Safety Management	質量及食品安全管理	3
Project/ Research Project	課題/研究課題	3/6

Discipline-specific Elective Subjects (12-15 Credits)

Subjects		No. of Credits
Introduction to Economics	經濟學初階	3
Introduction to Marketing	市場學初階	3
Management & Organization	管理學及組織學	3
Introduction to Food Service Operations	餐飲業營運入門	3
Cell Biology	細胞生物學	3
Advanced Analytical Techniques for Food Hazards	食品有害物資分析技術進階	3
Food Biotechnology	食品生物科技	3
Health Foods & Nutraceuticals	健康食品及營養補充品	3
Water & Waste Management	污水及廢料管理	2
Principles of Epidemiology and Risk Control	流行病學及風險管理	2
Introduction to Food Science	初級食品科學	3
Life Cycle Nutrition	生命期營養	3
General Chemistry II	普通化學 II	3
Natural Products Chemistry	天然產物化學	3
Environmental Science	環境科學	3
Economic Analysis for Process Technology	工藝科技的經濟分析	3

Food safety seminar of international renowned scholar

Career Prospects 就業前景

Graduates with a BSc(Hons) in Food Safety and Technology have a great variety of job opportunities in the local food industry, commercial testing laboratories/ centres, the government sector (including the Food and Environment Hygiene Department, the Government Laboratory, and the Agriculture, Fisheries and Conservation Department), catering companies, chain restaurants, supermarkets, hotels, food importers/ exporters, education/ research institutions, etc. Students with outstanding academic performance will have postgraduate study opportunities in local or overseas universities.

Professional Recognition 專業認可資格

This programme is designed to meet the international undergraduate degree standards of both the Institute of Food Technologists (IFT) and the International Union of Food Science and Technology (IUFoST). Graduates with 3 years of work experience in the food safety/ technology area can apply to become a certified food scientists.

Entrance Requirements
入學資格

For Entry with HKDSE Qualifications:

Applicants must satisfy the General Entrance Requirements of The Hong Kong Polytechnic University:

- English Language : Level 3;
- Chinese Language : Level 3;
- Mathematics: Level 2;
- Liberal Studies : Level 2;
- Two elective subjects : Level 3.
  2nd elective can be M1/M2.

Preferred subjects with the Highest Weighting:

- English Language
- Chinese Language
- Mathematics
- Extended Modules of Mathematics (M1/M2)
- All single and combined Science subjects

An attainment at Attained with Distinction (I) or above in one of the following Applied Learning subjects can be used for meeting the elective subject requirements:

- Event Planning and Operation
- Exercise Science and Health Fitness
- Fundamental Health Care
- Foundation in Chinese Medicine
- Food and Beverage Operations
- Health Care Practice
- Health and Beauty Keeping in TCM

Field visit to vegetable market organization in Cheung Sha Wan

*Interview may be held after the announcement of HKDSE results, if necessary.

Scholarships
獎學金

Plenty of scholarships are available for students with outstanding academic performance and this will be subject to quota available each year.

Important : The leaflet was compiled in August 2018. Applicants are advised to visit Academic Secretariat website www.polyu.edu.hk/study for the latest information including admission score calculation mechanism.

Awards Presentation to student with outstanding academic performance

Field visit to Gate Gourmet (Flight catering in HK)

Enquiry 查詢詳情

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DEPARTMENT OF APPLIED BIOLOGY AND CHEMICAL TECHNOLOGY

BSc (Hons) in Analytical Sciences for Testing and Certification

檢測及認證分析科學(榮譽)理學士學位

PROGRAMME CODE
12456

PROGRAMME LEADER
Dr Joseph Ka-fu Yung
容家富博士
BSc, PhD

PROFESSOR & HEAD
Prof. Samuel Lo
盧俊立教授
BSc, PhD

NORMAL DURATION
2 years

CREDITS REQUIRED FOR GRADUATION
At least 63 credits

TYPE OF FUNDING
Government-funded

MODE OF STUDY
Full-time

INTAKE QUOTA
32

Programme Aims & Characteristics

This programme aims to produce well-trained and competent professionals for chemical analysis as well as accreditation officers, which are currently in strong demand in the local testing and certification industry including commercial and Government laboratories, plus the quality assurance/ control units of any manufacturing organizations and professional assessor for accreditation and certification bodies. Through studying this articulation programme, the graduates (applicants are holders of Associate Degree/ Higher Diploma in science disciplines) will acquire the knowledge and techniques of up-to-date chemical sciences and allied disciplines plus the essential management skills pertaining to testing and certification industry in order to be professional executives. This programme offers a broad-based and balanced training in analytical and chemical sciences and the management skills for quality assurance, auditing and accreditation.

Intended Programme Learning Outcomes

Upon graduation from the programme, students will be able to :

- Demonstrate knowledge and understanding on fundamental principles of analytical sciences;
- Design and conduct experiments, as well as critically analyze and interpret experiment results;
- Recognize the principles in testing, inspection and certification;
- Identify and solve problems in analytical sciences and related fields;
- Integrate methods, skills and techniques necessary for professional practice;
- Recognize and adopt professional, ethical and social responsibility;
- Think independently, analytically and critically and resolve problems in creative ways;
- Communicate effectively in both English and Chinese;
- Make independent judgment on contemporary issues in a regional and global context;
- Function effectively in multi-disciplinary teams;
- Engage in life-long learning and appreciate culture.

These outcomes will be achieved by using different teaching/ learning methods and various assessment tools as well as a set of criterion-referenced assessment grades in each subject.

THE HONG KONG POLYTECHNIC UNIVERSITY
香港理工大學

DEPARTMENT OF APPLIED BIOLOGY AND CHEMICAL TECHNOLOGY
應用生物及化學科技學系

Programme Structure & Content

In the 2-year programme, all students will be required to complete at least 9 credits of the General University Requirements (GUR) and 54 credits of the Discipline Specific Requirements (DSR). The GUR includes service learning, Clustered Area Requirements (CAR), etc.

DSR for the first year of study will include the basic knowledge in chemical principle and analytical chemistry with laboratory skills training. In Year Two, the study will cover the advanced analytical methods in testing industry and essential management skills pertaining to testing and certification. Students are also required to complete a Capstone Project in which they tackle a problem related to analytical sciences.

Discipline-Specific Core Subjects (51 credits)

Subjects	No. of Credits
Chemical Principles for Testing and Analysis	3
Experimental Techniques in Chemistry	1
Introductory Cell Biology and Biochemistry	3
Organic Chemistry	3
Analytical Spectroscopy	3
Chromatographic Analysis	3
Chromatographic Analysis Laboratory	1
Materials Science and Analysis	3
Environmental, Medicinal, Food and Other Commodities Testing	3
Advanced Analytical Techniques	3
Advanced Analytical Techniques Laboratory	1
Test Method and Measurement Uncertainty	3
Metrology and Calibration	3
Inspection and Certification	3
Quality Management and Laboratory Accreditation	3
Microbiology and Toxicology	3
Microbiological Techniques	2
Capstone Project	3
Chinese Communication for Science Professionals	2
English for Scientific Communication	2

Discipline-Specific Elective Subjects (3 credits)

Subjects	No. of Credits
Medicinal Chemistry	3
Food Chemistry	3
Polymer Chemistry and Nanotechnology	3
Natural Product Chemistry	3

Entrance Requirements

- An Associate Degree or a Higher Diploma in a relevant discipline (e.g. Science, Chemistry, Chemical Technology), or the equivalent.
- The University will consider other qualifications as being equivalent to the specified entrance requirements on their individual merits.
- Mature applicants (aged 25 or above) who do not meet the minimum entrance requirements may be admitted on an individual and exceptional basis with the approval of the Faculty Board.
- Applicants may be required to attend interviews, if deemed necessary.

Important : This leaflet was compiled in August 2018. Applicants are advised to visit Academic Secretariat website www.polyu.edu.hk/study for the latest information.

Enquiry 查詢詳情

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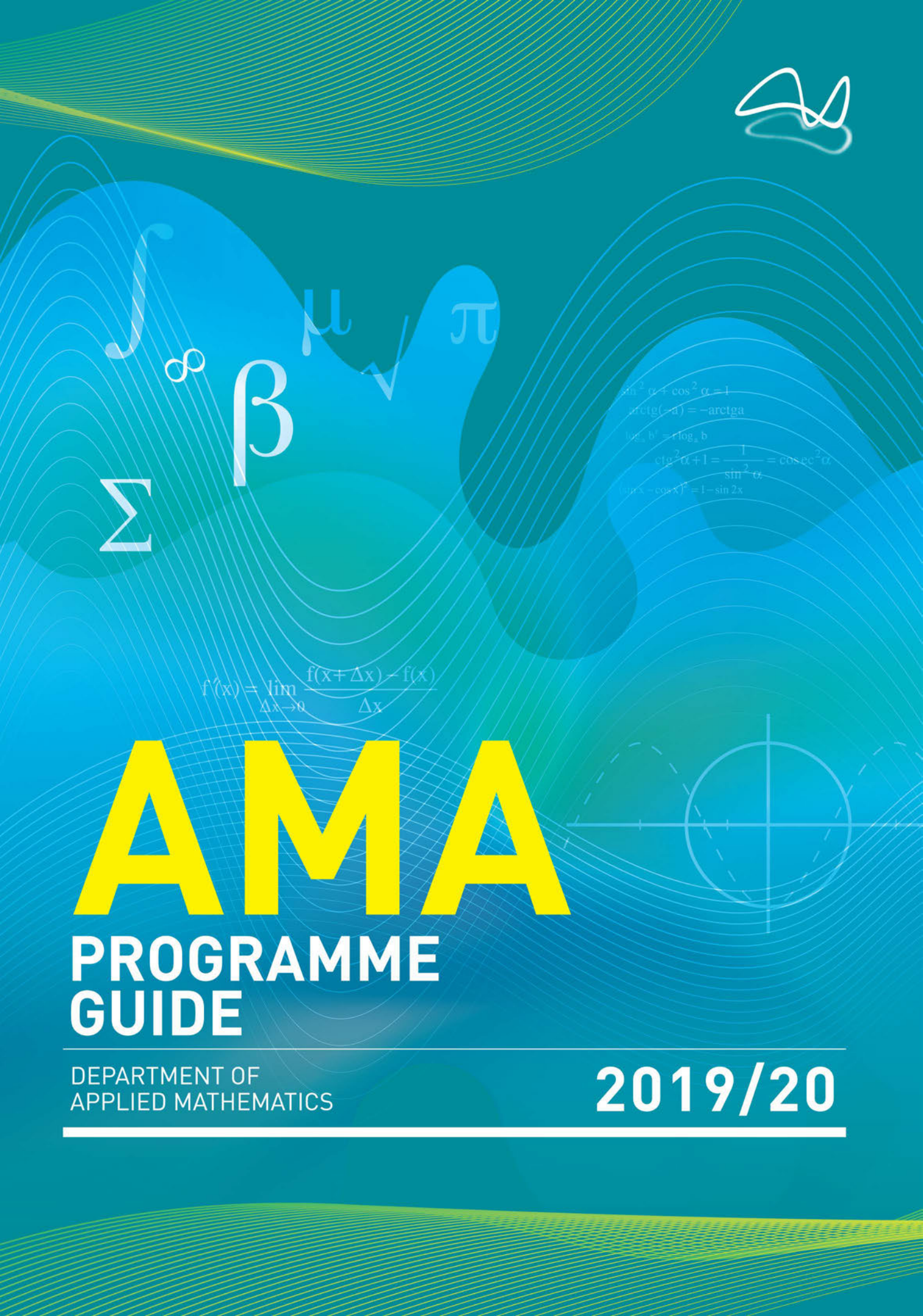


AMA

PROGRAMME GUIDE

DEPARTMENT OF
APPLIED MATHEMATICS

2019/20

$$f'(x) = \lim_{\Delta x \to 0} \frac{f(x+\Delta x) - f(x)}{\Delta x}$$

ABOUT THE DEPARTMENT

The Department of Applied Mathematics (AMA) is committed to quality teaching and research activities in mathematical science. We also contribute to the University by offering broad range of academic programmes and the supervision of research students. In addition, we provide courses to various departments and faculties across the University, via service teaching.

The academic programmes administered by the Department are as follows :

- BSc (Hons) in Data Science and Analytics
- BSc (Hons) in Investment Science and Finance Analytics
- Minor Programme in Applied Mathematics
- MSc in Operational Research and Risk Analysis
- MSc in Applied Mathematics for Science and Technology with two specialisms
  (i) Decision Science
  (ii) Actuarial and Investment Science

In 2018, PolyU is listed in the world top 100 in the subjects of Mathematics, and Statistics and Operational Research by the QS World University Ranking Agency, and the 52nd Best Global Universities for Mathematics by the U.S. News & World Report.

ACADEMIC & STUDENT DEVELOPMENT

The Department places great emphasis not only on quality teaching but also all-round development of our students. Beyond classroom teaching, a wide range of extra-curricular activities are planned to provide students with a global outlook and enrich their learning and knowledge.

Internship (Overseas and local)

With support from corporations and partners from different industries, our Department provides students with internship opportunities in Hong Kong, overseas and major cities in Chinese Mainland.

Steven TANG

Research internship at University of Oldenburg, Germany

"This kind of research internship is uncommon in Hong Kong and I'm thankful for this opportunity. The focus of the internship was, firstly, on efficiency enhancement and optimization of the simulation model; and secondly, on simulations and analysis of the model. After the simulation, interns may have an opportunity to write a scientific paper for their work if a new result or technique is found. Through this internship, I gained practical knowledge and skills which are extremely important to my study and future career development. More importantly, some unexpected result of my work has granted me an opportunity to publish a scientific paper!

This internship experience has totally changed my perception towards research work. It is not as boring as I expected. Instead, it could be interesting and challenging. This internship opportunity has inspired me pursue further study in Germany."

Student Exchange

In addition to the standard study path, some of our students took the opportunity to go on an exchange and spent a semester in a different university abroad. Students return from exchanges with exciting and rewarding experiences which have broadened their perspectives.

Fedoris WONG

"I spent a semester studying at the North Carolina State University (NCSU) in the United States. Going on exchange is a rewarding and gratifying experience. It offers me an excellent chance to expand my social network, experience different culture and grow personally. I made many new friends from all over the world, learnt different cultures and their historical backgrounds. The exchange experience has shaped my personality. I have become more independent and mature, and I would say I'm ready to face new challenges. When hard times find me in the future, I'm confident that I can deal with them."

Jason TANG

"I went to Melbourne in Australia for a six-month exchange study at Swinburne University of Technology. This trip was a wonderful and eye-opening experience for me. During this period, I participated in various activities such as Japanese Club, Residence Hall Orientations, exchange students' meetings etc., and made many new friends from around the world. We shared perspectives on different issues and enjoyed many great moments together. After this trip, I have changed in many ways and have had a deeper understanding of myself."

Mentorship Scheme

This scheme is introduced by the University to enhance the all-round development of students. Through regular mentoring interaction, the scheme provides a platform for business and industry professionals to share their valuable experiences with students, and to groom students to be a critical thinker, effective communicator, innovative problem solver, lifelong learner and ethnical leader in the ever-increasing competitive world.

Tea gathering with mentors

Business dining etiquette workshop

Student Learning Experience Scheme

The Department has organized a series of Learning Experience Tours for its Investment Science students, to Kyoto, Kazakhstan, Seoul, Shanghai, Sydney and Singapore since 2008. The scheme provides students with an opportunity to gain a better understanding of recent financial development in Mainland China and overseas, as well as to strengthen their sense of social and national responsibilities.

Study tour to Kazakhstan

$$f'(x) = \lim_{\Delta x \to 0} \frac{f(x+\Delta x) - f(x)}{\Delta x}$$

RESEARCH

Our research work in mathematical science encompasses both the theoretical and applied aspect, with emphasis on solving real-life problems in science, engineering, business and finance. The main research directions of the Department are in the areas of Applied Statistics and Financial Mathematics, Operations Research and Optimization, Engineering and Computational Mathematics.

The Department also encourages interdisciplinary research and has many joint publications and joint research projects. Our collaborative partners include a number of prestigious research institutions in the Mainland China, Australia, Japan, Europe and USA. Our main research areas include :

- Applied Probability and Statistics
- Computational Mathematics
- Financial Mathematics
- Matrix and Tensor Computation
- Nonlinear Optimization
- Numerical Methods for Differential Equations
- Optimal Control
- Partial Differential Equations

Besides, PolyU and the Academy of Mathematics and Systems Science of the Chinese Academy of Sciences (AMSS) jointly established the AMSS-PolyU Joint Research Institute (JRI) to capitalize on the combined expertise and promote research collaborations on Engineering and Management Mathematics.

In May 2018, the Department joined forces with Department of Computing to establish the University Research Facility in Big Data Analytics (UBDA), the first university-wide research facility in big data analytics among universities in Hong Kong. It will provide consultancy service and technical support to PolyU research community and industry partners and assist them to develop innovative solutions to research problems and application challenges.

Some Research Statistics

No. of research students :	3 (MPhil) 29 (PhD)
No. of on-going projects :	144
No. of papers in SCI journals : (2017/2018)	166
No. of SCI journals served as editors : (2017/2018)	25

The Investment Science programme provided me with a strong practical foundation for my career. In addition to the classroom-based study, the visits to Mainland financial institutions gave me an "on-site" understanding of the Chinese market. The programme also helped me to develop my ability to analyze and solve problems both of which will benefit me throughout my life.

Elvis WONG
Graduate of BSc(Hons) in Investment Science
Portfolio Strategist, HSBC

MESSAGES FROM ALUMNI

Edward YEUNG

Graduate of BSc(Hons) in Investment Science
Executive Director, Conrad Investment Services

The Investment Science programme strengthened my ability in quantitative analysis. It also provides me knowledge of many financial products which is very practical and relevant to my work.

Jenna HO

Graduate of BSc(Hons) in Investment Science
Citi Bank

Integrated with both mathematical and financial knowledge, the Investment Science programme helped me to develop not only theoretical knowledge and quantitative skillset, but also practical and interpersonal skills. As a science student, I learnt far beyond solving equations. From participating in group projects and presentations, I was inspired to come up with creative mathematics/ finance related ideas that are really interesting and exciting to me. Besides, we are encouraged to explore different statistical tools and software such as SAS, SPSS, R and Minitab. You have no idea how widely these software are being used in my daily work of validating prices of different bonds and equities now. Moreover, I have been trained to be able to establish insight through analyzing data. This programme has equipped me to pursue career in the banking industry.

Yittie TSE

Graduate of BSc(Hons) in Investment Science
Chinese Estates Holdings Limited

Being passionate in business and mathematics, studying Investment Science Programme is ever an inevitable choice. This programme helps build a good foundation on Mathematics, Statistics and Finance.

In order to equip students to apprehend real working environment, the department holds workshops on different kinds of statistical software, such as SAS and SPSS. It also offers students many great internship opportunities. During my studies in AMA, I received training from Census and Statistics Department and Kwong Wah Hospital, as a research assistant. Such experience enhances my knowledge on interpreting data, doing concise analysis and giving constructive suggestions to seniors.

Thanks to professors' and instructors' generous assistance on my worries over academic studies and future career path, I become more enthusiastic with statistics. Afterwards, I have completed my Master Degree in Statistics and Finance in UK. I am truly honored and grateful to receive distinction award. I am now working in Investment Department in Chinese Estates Holdings Limited. I am mainly responsible for integrating and analyzing different sorts of financial data; recording CEO's & company's security and bond trading and reporting to the Board of Directors. AMA has brought valuable career-enhancing knowledge and practical skills to me, ensuring a better adaption to such fast-paced and stressful job environment in financial industry.

DEPARTMENT OF
APPLIED MATHEMATICS

MSc in Applied Mathematics for Science & Technology

科技應用數學理學碩士學位

PROGRAMME CODE
63022

SPECIALISMS

Actuarial and Investment Science
精算及投資科學

Decision Science
決策科學

INTAKE QUOTA
60

Programme Aims and Objectives

- To provide mathematical modelling and computational techniques that are useful to engineers, scientists, technologists, and managers.
- To focus on applications and the use of computer packages to solve practical problems.

Actuarial and Investment Science (AIS)
精算及投資科學

Duration and Credit Requirement

Mode of Study	:	Full-time
Normal Duration	:	2 years*
Credits Required for Graduation	:	30 credits
Type of Funding	:	Self-financed

* Most students of this specialism actually complete the study within one year and a half.

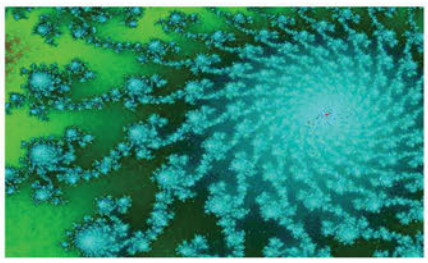
Aims

To provide students with a solid foundation in actuarial and investment science.

Programme Structure

Students studying for MSc (Actuarial and Investment Science) award need to complete

- 7 compulsory subjects and
- A dissertation or 3 additional core subjects



Decision Science (DS)
決策科學

Duration and Credit Requirement

Mode of Study	:	Part-time
Normal Duration	:	3 years
Credits Required for Graduation	:	30 credits
Type of Funding	:	Self-financed

Aims

To provide students with an up-to-date theoretical and practical knowledge in statistics, operations research and scientific computing relevant to decision making and practical problem solving in engineering, finance and business.

Programme Structure

Students studying for MSc (Decision Science) award need to complete

- 4 core subjects (including a compulsory subject "Mathematical Modelling for Science and Technology") and
- 3 other subjects (core or elective) and
- A dissertation or 3 additional core subjects

THE HONG KONG POLYTECHNIC UNIVERSITY
香港理工大學

DEPARTMENT OF APPLIED MATHEMATICS
應用數學系

Entrance Requirements

- A Bachelor's degree with Honours in engineering, computer science, basic science, business, economics, or the equivalent.
- Industrial or business experience will be an asset.

English Requirements

For applicants who are not native English speakers and their Bachelor's degree or equivalent qualification is awarded by institutions where the medium of instruction is not English, they are required to obtain one of the following to ensure that our admittees have reached a compatible English language standard :

- A TOEFL score of 550 or above for the paper-based test; OR a TOEFL score of 80 or above for the Internet-based test; OR
- An overall Band Score of at least 6 in the International English Language Testing System (IELTS).

Individual cases will be considered on their own merit by the department. Applicants may be required to attend interviews or tests to further demonstrate their language proficiency.

Other Information

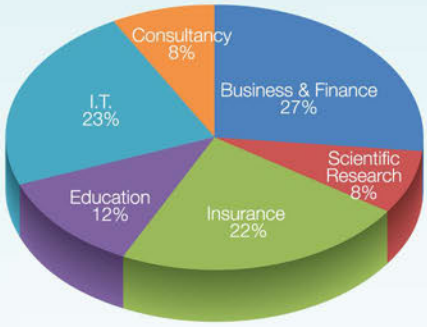
This programme has five subjects that are included in the list of reimbursable courses for Continuing Education Fund (CEF) for local students.

This programme covers the syllabi of examinations that are administered by the Casualty Actuarial Society (CAS) and the Society of Actuaries (SOA).

Career Prospects

Become leading professionals in engineering, management and finance for the Decision Science specialism; or in insurance, banking & finance and related sectors for the Actuarial and Investment Science specialism.

Graduate Employment Statistics (2015-2017)



Important : The leaflet was compiled in August 2018. Applicants are advised to visit Academic Secretariat website www.polyu.edu.hk/study for the latest information.

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URL 網址 www.polyu.edu.hk/ama/pg/63022

DEPARTMENT OF
APPLIED MATHEMATICS

MSc in Operational Research & Risk Analysis

運籌及風險分析理學碩士學位

PROGRAMME CODE
63024

NORMAL DURATION
1.5 years (Full-time*)
3 years (Part-time)

CREDITS REQUIRED FOR GRADUATION
30 credits

TYPE OF FUNDING
Self-financed

MODE OF STUDY
Mixed mode

INTAKE QUOTA
60

*Non-local applicants must be registered as full-time students

Programme Aims and Objectives

- To produce graduates with strong operational research, risk analysis and statistical skills and a thorough understanding of their applications in the world of modern operational research and risk analysis.
- To provide a solid theoretical foundation of operational research, risk analysis and statistics to its students, who will then be able to develop an outlook and powerful methodology that remain valuable in whatever careers they pursue in the fast moving world of business, commerce and finance industry.

Characteristics

Hong Kong is a gateway between East and West. As a global service centre, it plays a major role in interfacing between suppliers and customers around the world. To retain their leading competitive position in serving international markets, it is crucial for Hong Kong businesses to embrace best practices in operational research. As a result, companies are increasingly looking for innovative leaders with the vision and skill to manage their logistics. Moreover, this programme provides training in risk analysis so that graduates can serve policy makers and institutional investors, with foci on various types of financial products such as mutual funds and hedge funds.

THE HONG KONG POLYTECHNIC UNIVERSITY
香港理工大學

DEPARTMENT OF APPLIED MATHEMATICS
應 用 數 學 系

Programme Structure

- 7 Compulsory Subjects (21 credits); and
- 3 Elective Subjects (9 credits) or a Dissertation (9 credits)

Entrance Requirements

- A Bachelor's degree with Honours in engineering, computer science, basic science, finance, economics or the equivalent
- Industrial or business experience will be an asset

English Requirements

For applicants who are not native English speakers and their Bachelor's degree or equivalent qualification is awarded by institutions where the medium of instruction is not English, they are required to obtain one of the following to ensure that our admittees have reached a compatible English language standard :

- A TOEFL score of 550 or above for the paper-based test; OR a TOEFL score of 80 or above for the Internet-based test; OR
- An overall Band Score of at least 6 in the International English Language Testing System (IELTS).

Individual cases will be considered on their own merit by the department. Applicants may be required to attend interviews or tests to further demonstrate their language proficiency.

Other Information

This programme has four subjects that are included in the list of reimbursable courses for Continuing Education Fund (CEF).

Career Prospects

Graduate would be able to pursue a variety of jobs related to operational research and risk analysis, in areas such as logistics service provision, retail, banking, procurement/ sourcing and supply chain functions, and modern financial product development and pricing.

Graduate Employment Statistics (2016-2017)

Important : The leaflet was compiled in August 2018. Applicants are advised to visit Academic Secretariat website www.polyu.edu.hk/study for the latest information.

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MS FOREST CHAN
Tel 電話 3400 3141
Email 電郵 forest.chan@polyu.edu.hk

URL 網址 www.polyu.edu.hk/ama/pg/63024

DEPARTMENT OF
APPLIED MATHEMATICS

BSc (Hons) in Investment Science

投資科學 (榮譽) 理學士學位

PROGRAMME CODE

63423-SY

NORMAL DURATION

2 years

CREDITS REQUIRED FOR GRADUATION

At least 70 credits depending on the student's qualification (plus 2 training credits)

TYPE OF FUNDING

Government-funded

MODE OF STUDY

Full-time

INTAKE QUOTA

13 (For senior year place applicants)

PROGRAMME TEAM

Prof. Cedric Yiu
MSc, DPhil

Dr Zhao Xingqiu
BS, MSc, PhD

Dr Alex Wong
BSc, MPhil, PhD

Mr. Adam Leung
BSc, MPhil

Programme Characteristics

The programme provides students with solid training for statistical and mathematical skills, with a strong emphasis on applications in investment and finance. With a balanced curriculum in quantitative analysis, critical thinking and communication skills, the programme produces graduates who can pursue a variety of careers in the financial sector.

Programme Structure

Core Subjects (selected)

- Applied Probability Models for Investment
- Business Finance
- Corporate Finance
- Decision Analysis
- Econometrics
- Financial Computations & Programming
- Forecasting & Applied Time Series Analysis
- Intermediate Microeconomics
- Management of Financial Institutions
- Mathematical Methods for Investment
- Mathematics for Financial Derivatives
- Operations Research Methods
- Probability and Distributions for Risk Management
- Simulation
- Statistical Inference, etc.

Work-Integrated Education (WIE)

A minimum of 80 hours of internship in local or overseas institutes

Exchange Opportunity and Beyond Classroom Training

In additional to classroom learning, we provide exchange opportunity, and various training to groom all-round graduates:

- Mentorship scheme
- Overseas/ mainland study tours
- Bloomberg training
- Business dining etiquette
- Effective job interviewing skills
- Pre-internship training
- Attractive resumes & cover letters
- Ace recruitment tests
- Career talk, etc.

Zero-credit / Extra credit bearing subjects

Admitted students with insufficient background in statistics, advanced calculus, linear algebra and/ or in relevant disciplines are required to pass the zero-credit/ extra credit bearing subjects.

THE HONG KONG POLYTECHNIC UNIVERSITY
香港理工大學

DEPARTMENT OF APPLIED MATHEMATICS
應 用 數 學 系

Entrance Requirements

An Associate Degree or a Higher Diploma in Mathematics, Statistics, Science, Business or Engineering from The Hong Kong Polytechnic University, or similar qualifications from other institutions or equivalent.

Selection Criteria

Suitable applicants will be invited to interviews, which aim to test the potential for and interest of applicants in the programme, and to test their communication skills and general knowledge in finance.

Entrance Scholarship for Outstanding Non-JUPAS Admittees

Outstanding non-JUPAS admittees who meet the selection criteria will be awarded a one-off entrance scholarship of HKD10,000. Scan the QR code below or refer to http://www.polyu.edu.hk/ama/information/ama_entrance_scholarship.pdf for details.

Professional Recognition

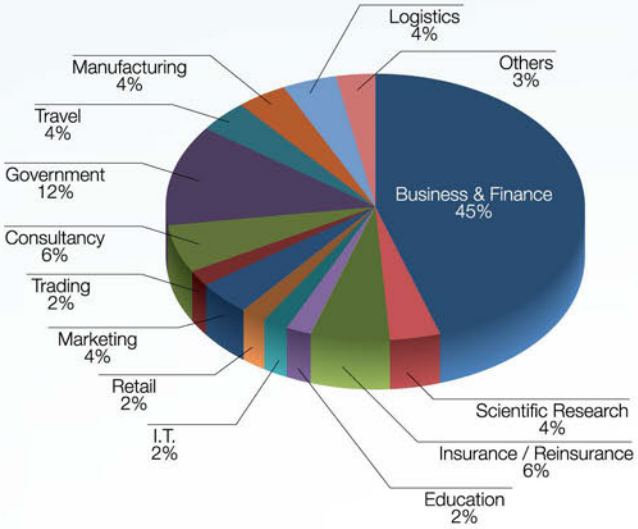
Upon the completion of programme, graduates are expected to receive partial exemption from the professional assessment of:

- Hong Kong Securities and Investment Institute
- Hong Kong Statistical Society
- Royal Statistical Society of UK

Career Prospects

This programme is designed to support graduates pursuing careers in business and financial-related field. Many of our graduates have found employment in prestigious financial institutions and renowned corporations throughout the Asia Pacific area.

Graduate Employment Statistics (2014 - 2017)



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Tel 電話 2766 6947

DEPARTMENT OF
APPLIED MATHEMATICS

BSc (Hons) in Data Science & Analytics

數據科學及分析(榮譽)理學士學位

PROGRAMME CODE
63425

NORMAL DURATION
2 years

CREDITS REQUIRED FOR GRADUATION
64 credits
(plus 2 training credits for WIE)

TYPE OF FUNDING
Government-funded

MODE OF STUDY
Full-time

INTAKE QUOTA
25

PROGRAMME TEAM

Dr Raymond Sze
BSc, MPhil, PhD

Dr Binyan Jiang
BS, PhD

Dr C.S. Leung
BSc, BEng, MPhil, PhD

Dr Allen Tai
BSc, MPhil, PhDm

Programme Aim

To produce graduates with expertise that cuts across core disciplines of mathematics, statistics and computer science. It emphasizes the critical arc that runs from data to information, information to knowledge, and knowledge to decision making. The education is to develop students' analytical, critical thinking, problem-solving and communication skills which will enable them to pursue a variety of careers.

Characteristics

This programme is focused on the study of analytical skills based on mathematics, statistics and computing, and apply them to the management, analysis of data, as well as the discovery of lawfulness from very large data sets or systems, now generally referred as Big Data. Students should be able to manage massive data and help make appropriate decisions upon successful completion of the programme.

Programme Structure

Student must complete all of the Discipline-Specific Requirements (DSR) and General University Requirements (GUR) subjects to fulfil the credit requirement for graduation, except those who are given credit transfers due to their prior study. The DSR subjects comprise Core Subjects and Elective Subjects as listed below.

Core Subjects* (At least 16 subjects with total 49 credits)

Probability and Distribution, Mathematical Methods for Data Science, Statistics for Data Science, Programming for Data Science, Decision Analysis, Database Systems, Business Intelligence and Customer Relationship Management, High Dimensional Data Analysis, Statistical Modeling for Discovery, Forecasting and Applied Time Series Analysis, Simulation, Data Mining and Data Warehousing, Big Data Analytics, Capstone Project, etc.

*Zero-credit subjects - Admitted students with insufficient background in mathematics or/ and programming are required to pass the zero-credit subject(s) Calculus and Linear Algebra, Principles of Programming or their equivalents.

Elective Subjects (At least 2 subjects with total 6 credits)

Financial Computations and Programming, Operations Research Methods, Econometrics, Optimization Methods, Web Application Design and Development, E-commerce Technology and Applications, Information Systems Audit and Control, Environmental Impact and Assessment, Urban Planning (Workshops), Medical Informatics, Computational Methods, Applied Probability Models for Investment, etc.

Entrance Requirements

- An Associate Degree or a Higher Diploma in IT, Statistics, Engineering, Science or Business from The Hong Kong Polytechnic University, or similar qualifications from other institutions or the equivalent.

Interview Arrangement

- Suitable applicants will be invited to interviews, which aim to evaluate the potential for and interest of applicants in the programme, and to test their communication skills and general knowledge relevant to the programme.

Entrance Scholarship for Outstanding Non-JUPAS Admittees

Outstanding non-JUPAS admittees who meet the selection criteria will be awarded a one-off entrance scholarship of HKD10,000. Scan the QR code below or refer to http://www.polyu.edu.hk/ama/information/ama_entrance_scholarship.pdf for details.

Professional Recognition

Upon the completion of programme, graduates are expected to receive partial exemption from the professional assessment of:

- Hong Kong Statistical Society
- Royal Statistical Society of UK

Career Prospects

Graduate would be able to pursue a variety of careers such as finance, telecoms, information technology, market research, manufacturing and pharmaceuticals. Graduates can also pursue further studies in postgraduate programmes locally or overseas.

Enquiry 查詢詳情

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DEPARTMENT OF
APPLIED MATHEMATICS

BSc (Hons) in Investment Science and Finance Analytics

投資科學及金融分析 (榮譽) 理學士學位

PROGRAMME CODE
63426

JUPAS CODE
JS3806

NORMAL DURATION
4 years

CREDITS REQUIRED FOR GRADUATION
123 credits for HKDSE intake (plus 2 training credits)

TYPE OF FUNDING
Government-funded

MODE OF STUDY
Full-time

INTAKE QUOTA
19

PROGRAMME TEAM
Prof. Cedric Yiu
MSc, DPhil

Dr Zhao Xingqiu
BS, MSc, PhD

Dr Alex Wong
BSc, MPhil, PhD

Mr. Adam Leung
BSc, MPhil

Programme Aims and Objectives

- To produce graduates with expertise that cuts across core disciplines of mathematics, statistics, finance and computer science. It emphasizes the critical arc that runs from financial data to information, information to knowledge, and knowledge to decision making.
- To develop students' ability in quantitative analysis, financial data analytics, critical thinking and communication skills, which will enable them to pursue a variety of careers such as investment banking, fund management, risk management, financial data analysis, product development and pricing.

Programme Elements

Work-Integrated Education (WIE)

A minimum of 80 hours of internship in local or overseas institutes.

Exchange Opportunity and Beyond Classroom Training

In addition to classroom learning, we provide exchange opportunities, and various trainings to groom all-round graduates:

- Mentorship scheme
- Overseas/ mainland study tours
- Bloomberg training
- Interview & resumes writing skills
- Ace recruitment tests
- Career talks, etc.

Professional Recognition

Upon the completion of programme, graduates are expected to receive partial exemption from the professional assessment of:

- Hong Kong Securities and Investment Institute
- Hong Kong Statistical Society
- Royal Statistical Society of UK

Entrance Scholarship for Outstanding HKDSE students

Outstanding HKDSE admittees who meet the selection criteria will be awarded a one-off entrance scholarship of various amount. Scan the QR code below or refer to www.polyu.edu.hk/ama/information/ama_entrance_scholarship.pdf for details.

THE HONG KONG POLYTECHNIC UNIVERSITY
香港理工大學

DEPARTMENT OF APPLIED MATHEMATICS
應 用 數 學 系

Entrance Requirements

HKDSE score	
Level 3 or above	Level 2 or above
English language	Mathematics
Chinese language	Liberal studies
2 elective subjects OR 1 elective subject + M1/M2	

Preferred subjects with the highest weighting:	
Chinese Language	English Language
Mathematics	Extended modules of Mathematics (M1/ M2)
All single and combined Science subjects	
Business, Accounting and Financial Studies	
Business, Accounting and Financial Studies (Accounting)	
Business, Accounting and Financial Studies (Business Management)	

Please refer to 'Study@PolyU' for details of admission score calculation mechanism.

The University will consider other qualification as being equivalent to the specified entrance requirements on their individual merits.

Interview Arrangement

Selected applicants will be invited to attend an interview prior to the announcement of HKDSE results (around late May/ early June 2019)

Career Prospects

This programme is designed to support graduates pursuing a variety of careers such as investment banking, fund management, risk management, financial data analysis, product development and pricing.

Important : This leaflet was compiled in August 2018. Applicants are advised to visit Academic Secretariat website www.polyu.edu.hk/study for the latest information.

This programme is offered subject to approval.

Enquiry 查詢詳情

URL 網址 www.polyu.edu.hk/ama/ug/63426
Email 電郵 isfa.info@polyu.edu.hk
Tel 電話 2766 6947

AP PROGRAMME GUIDE

DEPARTMENT OF APPLIED PHYSICS

2019/20

ABOUT THE DEPARTMENT

Department of Applied Physics has experienced a rapid growth to be a world-class centre for education and research in applied physics. Our graduates have been serving the society in key positions and have made significant contribution to the development of Hong Kong in its evolution from an industrial-based to knowledge-based economy. We have over 30 laboratories with advanced equipment and facilities for supporting our teaching and research. We strive for excellence in teaching, research and professional services.

Programmes

Our programmes cover specialist areas of applied or engineering physics crucial to the industries in Hong Kong. Our BSc(Hons) in Engineering Physics programme is the first of its kind in Hong Kong. It includes both physics and engineering, combining scientific knowledge and technical training that are relevant to future employers.

An Articulation Programme in Optoelectronics has been offered since 2008/ 09. It incorporates the following specialist subjects: Display Technology, Detectors and Imaging Devices, Optical Design, Laser Principles and Applications, Fibre Optics, as well as Semiconductor Optoelectronic Devices.

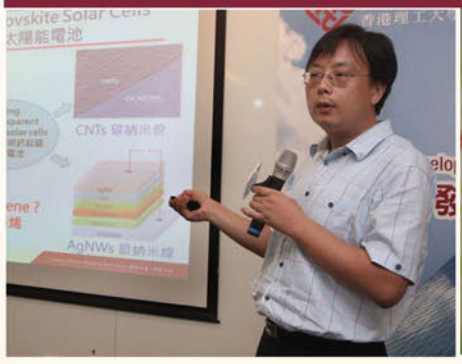
Our Higher Diploma in Applied Physics programme has a long-standing record of excellence and graduates are widely accepted by the industrial and commercial sectors. Many of our graduates are now in important executive positions. Last year, over 85% of our graduates proceed for further studies, such as our Optoelectronics Articulation Programme.

Postgraduate programmes, including Master of Philosophy (MPhil) and Doctor of Philosophy (PhD) research programmes, are offered by our department.

- HD in Applied Physics
  應用物理學高級文憑
- BSc(Hons) in Engineering Physics
  工程物理學(榮譽)理學士學位
- BSc(Hons) in Engineering Physics (Optoelectronics)
  工程物理學(榮譽)理學士學位(光電子學)
- MPhil in Applied Physics
  應用物理學哲學碩士學位
- PhD in Applied Physics
  應用物理學哲學博士學位

RESEARCH

One of the missions of our department is to direct the research efforts primarily towards applied and strategic research relevant to the needs of Hong Kong. According to the latest Research Assessment Exercise conducted by the Hong Kong Research Grants Council, AP has been classified as the second best among all physics departments in Hong Kong and the best in Materials Science. In addition to achieving excellence in research publications, our research teams have received more than HK$60 million in external research grants since 2011.



Major Research Areas

- Nanomaterials
  納米材料
- Energy Materials and Devices
  能源材料與器件
- Photonics, Plasmonics and Optoelectronics - Materials and Devices
  光子學、等離激元光子學與光電子學 - 材料與器件
- Smart Materials and Devices
  智能材料與器件
- Theoretical and Computational Physics
  理論與計算物理

Research Opportunities

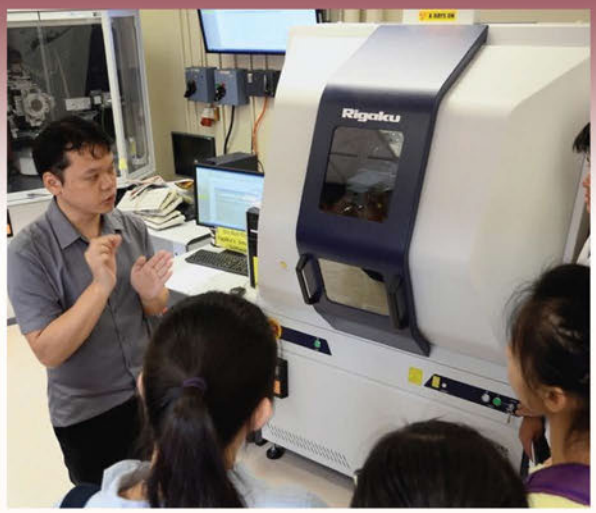
The department provides research opportunities for undergraduate students who have strong interest in postgraduate study. Financial supports will be provided to selected student assistants who are involved in research activities during summer. Research quality of our staff members and postgraduate students have been recognized through receiving research awards, grants, and fellowships/ scholarships.

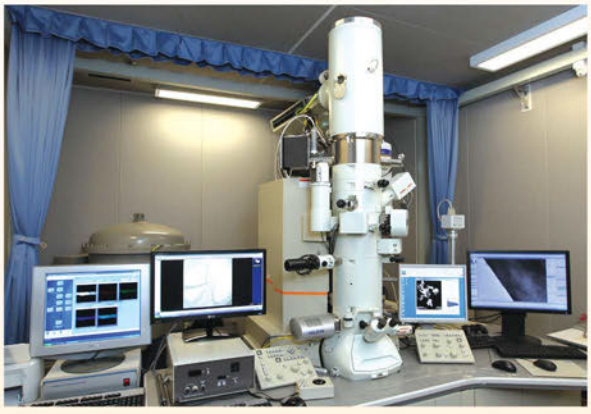
Some Research Statistics

No. of research students :	31	(MPhil)
	37	(PhD)
No. of research personnel :	75	
No. of on-going projects :	115	
No. of papers in refereed journals :	>160	per year

Centre for Smart Materials

The Centre for Smart Materials (CSM) is established as one of the research strengths of PolyU. The mission of the CSM is to become an international Centre of Excellence for research and development activities in the processing, characterization and application of smart materials, including piezoelectric and pyroelectric ceramics, polymers and composites. Numerous patents have been obtained. So far, several US patents have been licensed to ASM Assembly Automation Ltd. for product development. Based on the work supported by Innovation and Technology Fund (ITF), Prof. Helen Chan and Prof. C.L. Choy have won a State Technological Invention Award in 2002. The project team has also won many other awards in the past years, including a gold award in the Seoul International Invention Fair 2002, a gold award in 37th International Exhibition of Inventions in 2009, and "Vaisala Award for Weather Observing and Instrumentation for 2010" presented by the Royal Meteorological Society.





University Research Facility

University Research Facility in Materials Characterization and Device Fabrication (UMF) was established on 1 December 2014. According to the University's strategic plan, UMF is one of the University Research Facilities to provide a gateway to world-class research at PolyU. PolyU is uniquely positioned to apply its materials research to critical challenges of the future, with UMF aiming to provide leadership in the materials community and be a catalyst for multidisciplinary education and innovations, through coordination of materials-related activities, maintaining core and shared facilities, training students and fostering collegial exchanges of expertise.

ACADEMIC & STUDENT ACTIVITIES

Preparatory Courses

To better prepare students with diverse academic backgrounds, PolyU offers preparatory courses in Physics and Mathematics for those who would benefit from more tuition in these subjects.

Innovative Learning Activities

Our staff have created many innovative educational activities to help improving the learning experience of students. The Remote Lab is one of our inventions which has been recognised by receiving international educational awards.

Career Talks

To provide our students with the latest scenario of the job market and career opportunities, talks are held every year with the help of the Alumni Association of our Department. Our graduates, working in different fields, are invited to share their experiences in job hunting, interviews and career development.

Student Exchange Programmes

Our students have been involved in short exchange programmes in universities and institutions worldwide including China, Germany, USA and the UK. Students from overseas institutions have also been staying with us. In addition, some of our students participate in exchange programmes to study for a whole semester in major universities abroad (e.g. USA, Germany), with transferable credits.

Learning Experience in Mainland China

Many of our students visited the University of Science and Technology of China, and Tsinghua University. Both were supported by the Ministry of Education of the People's Republic of China. We believe that the development of students' global outlook as well as the learning experience in the Mainland China are important elements towards the all-round development of students.

MESSAGES FROM ALUMNI

"I hope that you can also start your bright future in AP!"

NG Chi Chung, Eddy
Graduate of HD in Applied Physics

MAK Chun Hin

Graduate of BSc(Hons) in Engineering Physics

The Engineering Physics programme covers a wide range of physics theory and the working principles of many engineering applications, providing me with a quality education that allowed me to choose whether to start a career in the fields of applied science/ engineering or pursue further studies.

林江泉

Graduate of HD in Applied Physics

自從修讀了應用物理學高級文憑課程後，我學到了不同方面的物理理論，與此同時，本課程還為學員提供了許多不同的實驗科目。導師對實驗的教學和解說，令我對實驗的內容有更深入的理解，並能令我更容易明白其中較困難的物理理論。我深信這個課程對於我將來無論是從事相關的工作還是升學深造，都會有很大的幫助。我很高興兩年前能夠明智地修讀應用物理學這個非常實用的課程。

仲任

Graduate of BSc(Hons) in Engineering Physics

時光荏苒，在理大的四年已經在不知不覺中過去。在這四年，我不僅獲得了跟隨教授參與科學研究的機會，還獲學校推薦到美國最頂尖大學交換學習。同時，理大給了我們豐富的課外活動機會。從四年前的青澀懵懂到如今的自信沉著，我感謝理大及應用物理學系教導了我們知識，塑造了我們的人格，並給予我們發現自我的機會。
(Mr. ZHONG Ren received the "Outstanding Student Award" of the Faculty of Applied Science and Textiles in 2016)

QUAN Yuhui

Graduate of BSc(Hons) in Engineering Physics

In the blink of an eye, I have finished my four years study at the Department of Applied Physics. I am grateful that the professors in the Department are caring and helpful. I enjoyed the study and discussion with my classmates. I also participated in the research project under supervision of our professors. Last summer, I received financial support from the University to study in the University of Cambridge, which allowed me to travel around and watch an exciting home match of Manchester United. In the past four years, I have acquired a lot of knowledge, developed more rigorous thinking and gained precious friendship. It was a wonderful experience in my life to study at the Department of Applied Physics of PolyU.
(Mr. QUAN Yuhui received the "Outstanding Student Award" of the Faculty of Applied Science and Textiles in 2017)

WAN Li

Graduate of BSc(Hons) in Engineering Physics

I dreamed to become a scientist when I was young. It is lucky for me to study in the Department of Applied Physics in PolyU. All the professors and tutors are very helpful. I have the opportunity to explore the world of physics and learn more about research study. I have consulted quite a few professors about their research and read their publications. These broadened my horizon and helped me greatly in planning my future.
(Mr. WAN Li received the "Outstanding Student Award' of the Faculty of Applied Science and Textiles in 2013)

DEPARTMENT OF APPLIED PHYSICS

HD in Applied Physics
應用物理學高級文憑

$E=mc^2$

PROGRAMME CODE
11341

JUPAS CODE
JS3014

PROGRAMME LEADER
Dr C.H. Lam
BSc, PhD

NORMAL DURATION
2 years

CREDIT REQUIREMENTS
At least 62 credits (depending on student's HKDSE attainment)

TYPE OF FUNDING
Government-funded

MODE OF STUDY
Full-time

INTAKE QUOTA
51

課程特色

- 歷史悠久，累積超過二十年的辦學經驗
- 全港唯一的物理學高級文憑課程
- 政府資助課程
- 有多種途徑升讀本港及海外學士學位課程
- 與本系之工程物理學(榮譽)理學士學位課程緊密銜接
- 畢業生從事工商界、政府部門、科研及教育等多方面工作

Programme Structure

- Students study three Major areas: applied physics, materials science/ technology and scientific instrumentation
- Year one subjects include Core Subjects, in addition to Mathematics, Chinese and general education subjects
- Year two focuses on more advanced Core Subjects and includes an Innovation Project

Entrance Requirements
入學資格

For those applying on the basis of HKDSE, the subject requirements are :

- Level 2 in 5 HKDSE subjects including English Language and Chinese Language
- The preferred subjects with the highest weighting for this programme are Chinese Language, English Language, Mathematics, extended modules of Mathematics (M1/ M2), Chemistry, Physics and Combined Science with Physics and/ or Chemisty

For those applying on the basis of other qualifications, the specified qualifications are :

Diploma in Computer & Communications Engineering, Computer & Information Engineering, Electrical Engineering, Electronic & Communications Engineering, Industrial Engineering & Information Management, Manufacturing Engineering, Manufacturing Engineering Management, Mechanical Engineering, Product Engineering Design & Technology Management, Production & Industrial Engineering, Telecommunications Engineering or equivalent

THE HONG KONG POLYTECHNIC UNIVERSITY
香港理工大學

DEPARTMENT OF APPLIED PHYSICS
應用物理學系

Career & Further Study Opportunities

Our graduates work in a variety of areas from education to manufacturing and service in industrial sectors and government organizations. They occupied a wide variety of positions, such as engineers in testing laboratory, electronic engineers, materials engineers, sales engineers, quality assurance engineers, reliability engineers, customer service engineers, product engineers, project engineers, instructors, computer engineers, programmers, IT officers, technical officers and technicians. Their choices of career are diverse and flexible and many of them pursued further studies in universities.

升學

本課程畢業生可在本地或海外升讀學士學位課程。畢業生亦可升讀並於兩年內完成本系之工程物理學(榮譽)理學士學位課程[BSc(Hons) in Engineering Physics]；或修讀該學位課程附設的"光電子學"專業[Specialism in Optoelectronics]。該專業為兩年制的政府資助學士學位銜接課程，收生對象除本系的高級文憑 (HD in Applied Physics) 畢業生外，亦包括指其他相關高級文憑或副學士 (Associate Degree) 的畢業生。

Research Opportunities

The department provides research opportunities for undergraduate students who have strong interest in postgraduate study. Financial supports will be provided to selected student assistants who are involved in research activities during summer. According to the Research Assessment Exercise (RAE) 2014 implemented by the University Grants Council of Hong Kong, the Department of Applied Physics (AP) attains the highest proportion of world leading (4*) research work in PolyU. AP ranks 1st in the cost centre of Materials Science and comes in 2nd place among all Physics Departments in Hong Kong.

Enquiry 查詢詳情

AP GENERAL OFFICE
Fax 傳真 2333 7629
Email 電郵 apdept@polyu.edu.hk

URL 網址 www.polyu.edu.hk/ap

Join us now on Facebook

Department of Applied Physics - The Hong Kong Polytechnic University

Scholarships

Thanks to generous donations by our industrial partners, the Department of Applied Physics has set up scholarships for outstanding students. For details, please refer to the leaflet of our BSc(Hons) in Engineering Physics programme. Additional scholarships are stipulated to our students in HD in Applied Physics. Each year, our students also receive scholarships open for competition to all students in PolyU or in Hong Kong. Besides academic performance, leadership potential, contribution to the community, outstanding achievements in sports, arts or other student activities, and other relevant qualities are often considered in the recipient selection process for individual scholarships. The lists of scholarships are as follow:

Scholarships for HD in Applied Physics students :

- D.S. Chang Scholarship
- D.A. Ryder Scholarship

Important : The leaflet was compiled in August 2018. Applicants are advised to vist Academic Secretariat website www.polyu.edu.hk/study for the latest information including admission score calculation mechanism.

DEPARTMENT OF APPLIED PHYSICS

BSc (Hons) in Engineering Physics

工程物理學(榮譽)理學士學位

PROGRAMME CODE
11439

JUPAS CODE
JS3985

PROGRAMME LEADER
Dr C.W. LEUNG
BEng, PhD

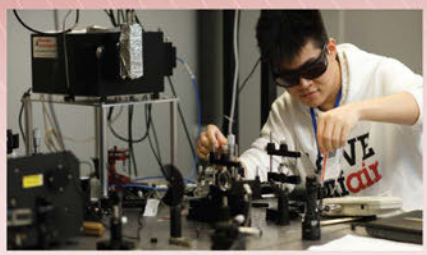
NORMAL DURATION
4 years

CREDIT REQUIREMENTS
At least 125 credits (depending on student's HKDSE attainment)

TYPE OF FUNDING
Government-funded

MODE OF STUDY
Full-time

INTAKE NUMBER
25



Undergraduate student performing laser experiment

Introduction

In line with the implementation of the New Senior Secondary system (NSS), The Hong Kong Polytechnic University (PolyU) designs various new 4-year university undergraduate programmes to those who have completed their studies through this NSS system. Department of Applied Physics (AP) also offers an undergraduate programme in physics: BSc(Hons) in Engineering Physics (EP). This programme aims at training students who command a wide range of professional, technical and generic skills to cope with the globalization in world-wide communities and rapid growth of technology. Graduates would appreciate the versatility and flexibility that this programme provides, knowing how to apply what they have learned from classroom.

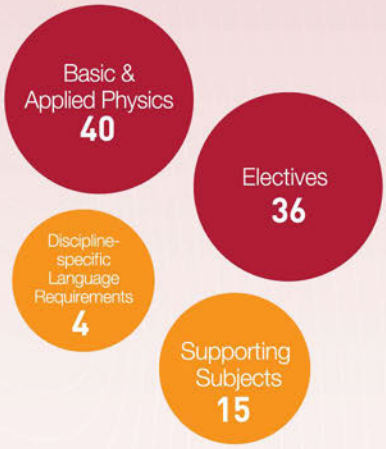
Programme Structure

Basically, a student who is eligible to graduate in this programme should have completed at least 125 credits (depending on student's HKDSE attainment). These credits are divided into two categories :

30 credits from General University Requirements (GUR) and 95 credits from Discipline-specific Requirements (DSR).

Discipline-specific Requirements

The Discipline-specific Requirements and the number of credits required for EP are shown in the following diagram :



Basic and Applied Physics :

Mechanics, electromagnetism, materials science, waves and optics, quantum mechanics, condensed matter physics, etc.

Electives :

Lasers, optoelectronics, semiconductors, acoustics, computer simulations, nanotechnology, devices, radiation physics, medical imaging, etc.

GUR Subjects

GUR include the Language Requirement on both Chinese and English, Freshman Seminar, Leadership and Intra-personal Development, Community Service Learning, Healthy Lifestyle as well as 4 Broadening Subjects (CAR) in 4 cluster areas.

For details, please visit the following website : http://www.polyu.edu.hk/ous/4-year-undergraduate-degree-curriculum/curriculum-framework

General Entrance Requirements :

Students applying for this programme should meet the minimum PolyU General Entrance Requirements and Programme Specific Entrance Requirements described as follows :

HKDSE Subjects	Core Subjects			
	Chinese Language	English Language	Mathematics	Liberal Studies
Minimum Level Requirement	3	3	2	2

HKDSE Subjects	Elective Subjects	
	1st Elective	2nd Elective or M1/M2
Minimum Level Requirement	3	3

The preferred subjects with the highest weighting for this programme are Chinese Language, English Language, Mathematics, extended modules of Mathematics (M1/M2), Chemistry, Physics and Combined Science with Physics or Chemistry.

Note: Applicants with an Associate Degree in Applied Science or Engineering, a Higher Diploma in Applied Physics, Applied Optics, Optical Technology, or Engineering in relevant areas may also be admitted to our articulation programme BSc(Hons) in Engineering Physics (Optoelectronics).

Enquiry 查詢詳情

AP GENERAL OFFICE
Fax 傳真 2333 7629
Email 電郵 apdept@polyu.edu.hk

URL 網址 www.polyu.edu.hk/ap

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Department of Applied Physics - The Hong Kong Polytechnic University

Research Opportunities

The department provides research opportunities for undergraduate students who have strong interest in postgraduate study. Financial supports will be provided to selected student assistants who are involved in research activities during summer. According to the Research Assessment Exercise (RAE) 2014 implemented by the University Grants Council of Hong Kong, the Department of Applied Physics (AP) attains the highest proportion of world leading (4*) research work in PolyU. AP ranks 1st in the cost centre of Materials Science and comes in 2nd place among all Physics Departments in Hong Kong.

Scholarships

Thanks to generous donations by our industrial partners, the Department of Applied Physics has set up a number of scholarships for outstanding students in our BSc(Hons) in Engineering Physics programme. First-year students with outstanding academic perfomance in HKDSE could receive scholarships of value up to HK$40,000 per student. In particular, students having obtained 5** in Physics will be awarded scholarships each valued at HK$25,000 or more. Additional scholarships are stipulated to our students in HD in Applied Physics. Each year, our students also receive scholarships open for competition to all students in PolyU or in Hong Kong. Besides academic performance, leadership potential, contribution to the community, outstanding achievements in sports, arts or other student activities, and other relevant qualities are often considered in the recipient selection process for individual scholarships. The lists of scholarships are as follows :

Scholarships for BSc in Engineering Physics students :

- D.S. Chang Scholarship for Engineering Physics Students
- Hong Kong X'tals Scholarship
- ChinaLink Networks Scholarship
- Department of Applied Physics Scholarship
- Sam Cheong Stove Parts Scholarship
- Tung Po Ultrasonic Technology Scholarship
- Professor Chau Wai-yin Memorial Scholarship

Important : The leaflet was compiled in August 2018. Applicants are advised to visit Academic Secretariat website www.polyu.edu.hk/study for the latest information including admission score calculation mechanism.

ITC
PROGRAMME GUIDE

INSTITUTE OF TEXTILES & CLOTHING

2019/20

ABOUT THE INSTITUTE

The Institute of Textiles and Clothing (ITC) has a proud and well-respected history. As the pioneer of fashion and textiles education in Hong Kong, ITC is recognised as one of the region's first class educational institutions, with a vision of being the leading institution in fashion, textiles and design education, research and partnership.

After starting out with the Diploma in Textiles programme in 1957, the Institute now offers a wide range of quality academic programmes covering disciplines including fashion and textiles technology, design, retail and marketing, intimate apparel and activewear, as well as knitwear design and technology. These programmes are offered at levels ranging from Bachelor degrees to Doctorate degrees.

ITC has a team of excellent staff members who uphold the highest quality in teaching and research in the areas of design, business and technology. Students are taught in an integrated and multidisciplinary manner, with an emphasis on both theory and practice. Besides, students are successfully developed as all-round graduates who have a global outlook, a high sense of social responsibility, critical and creative thinking abilities. They are highly regarded by local industries and have been a formidable force behind the economic success of the Hong Kong fashion and textile industries.

I would like to take this opportunity to thank ITC for providing the best stepping stone for students to achieve their dreams. As one of the graduate students, I am grateful for the opportunities that ITC has given me, such as taking part in the overseas exchange programme, fashion design competitions, internship and graduation fashion show. Without these opportunities given to me while I was a student, I would not have been able to bring my design collection to the international stage. After participating in several competitions and experiencing an exchange study trip in New York City, the path of my career started to change which led me onto an exciting journey. Today, I have received several design awards both in Asia and overseas. I have also started my own fashion company called 'Improbable Limited.' which is inspired by my graduation collection theme 'Improbable Journey' at ITC.

ITC has truly made a difference for me.

Shirley KO

BA(Hons) Scheme in Fashion & Textiles, 2014
Specialism: Fashion & Textile Design
Awardee, Hong Kong Young Design Talent Awards 2014

ACADEMIC & STUDENT ACTIVITIES

At ITC, students are provided with plenty opportunities of co-curricular events and off-campus activities. Students can participate in a variety of interest groups, student associations and committees, overseas exchange programme and cross-border visits.

Student Exchange Programme

The Student Exchange Programme has been very successful in enhancing the holistic development of students, particularly in the areas of global outlook, language skills, social and national responsibility and cultural appreciation. Partnership has been established with over 30 universities all over the world, such as Australia, Germany, Finland, Japan, Sweden, UK and USA.

Nominated students will be attached to our partner universities in the form of credit-earning study for one semester. Subsidies, sponsorships and scholarships are available to cover a portion of the expenses.

Work-Integrated Education (WIE) Programme and Summer Internship

The WIE Programme enhances the development of all-round students with professional competence. It provides an excellent opportunity to our students to gain real life working experience and develop generic abilities.

Placement/ internship in apparel companies, fashion retailers and manufacturers are arranged locally and globally. Students can enrich their knowledge and have hands-on experience in the day-to-day operations of the fashion and textiles industry.

Fashion Shows

ITC organises fashion shows for our selected graduating students to showcase their talent and creativity to the public every year. Having one's design on stage is the ultimate goal of all fashion design students, which concludes their university life with an unforgettable and fulfilling experience.

Career Development

ITC arranges a number of garments and textiles companies, fashion retailers and manufacturers to give recruitment talks to final year students at the end of semester every year. This is an excellent opportunity for students to extend their network to the industry and get prepared for their career development in fashion and textiles business.

FACILITIES

ITC offers an extraordinary environment with comprehensive facilities to stimulate learning and creativity of our students.

ITC is equipped with various teaching workshops including Spinning Workshop, Weaving Workshop, Knitting Workshop, Dyeing & Finishing Workshop, Garment Workshop; advanced laboratories such as 3D Body Scanning Laboratory, Material Synthesis & Processing Laboratory, Plasma Treatment Laboratory, Laser Treatment Laboratory, Fibre Optics Laboratory, Analytical Laboratory, Physical Testing Laboratory and etc; two studios including Fashion Design Studio and Photography Studio, and special centres including Fashion and Textiles Resource Centre, Shape Memory Textiles Centre and Care Apparel Centre.

These well-equipped facilities foster the development of ITC as a force in visionary research and in the pedagogy of higher education in fashion and textiles.

MESSAGES FROM ALUMNI

Cultivation + Motivation = ITC

ITC - a world-class teaching profession makes us A grade people. Ability and attitude are critical success factors in fashion industry. During my years in ITC, I was equipped with not only the knowledge of fashion design, but also the positive attitude towards challenges – to be persistent in striving for the best, which could definitely prepare myself to tap into the fashion industry after I graduated.

Kay KWOK

BA(Hons) Scheme in Fashion & Textile Design, 2009
Specialism: Fashion & Textile Design
Creative Director of KAY KWOK
Designer of ITC 'Designer-in-residence' Scheme since 2014

Eelin NG

BA(Hons) Scheme in Fashion & Textiles, 2013
Specialism: Fashion Technology

Covering the design, business and technology aspects of the fashion and textiles industry, packed with remarkable industrial facilities, vast learning resources and cutting-edge R&D capabilities, ITC is an internationally renowned education institute. Staffed by renowned scholars and experienced teaching fellows, ITC's education programmes provide practical and holistic knowledge that shape future leaders in the industry.

During my wonderful years as a student in ITC, it offered me a world class education and practical training in all aspects of the fashion and textiles industry. Today, it continues to flourish.

Nigel YAU

BA(Hons) Scheme in Fashion & Textiles, 2012
Specialism: Intimate Apparel

ITC provides an experience of collision – a bombardment of unique personalities, different cultures, and the combined energy of many people getting to share ideas and passion.

Bringing together international students and staff in one platform, everyone exercise their passion while executing their creative ideas in between the hanging out, laughing, endless midnight, and stitching.

"If I die, what a beautiful death. To die in the exercise of your passion." Philippe Petit

Katie NG

BA(Hons) Scheme in Fashion & Textiles, 2015
Specialism: Knitwear Design with Technology
Champion, Feel the Yarn 2015 (an international knitwear design competition held in Milan, Italy)

My fruitful years at ITC are credited to a team of brilliant professors. Being given practical and valuable experiences to realise fashion collections combined with a strong knowledge base from the ITC learning programme have been the key to my success. Learning experiences with comprehensive facilities and resources, together with guidance from the professors and international competition experience have turned me into a competitive person in the knitwear industry.

INSTITUTE OF TEXTILES & CLOTHING

MA in Fashion & Textile Design

服裝及紡織品設計文學碩士學位

PROGRAMME CODE
14097

PROGRAMME LEADER
Ms Basia Szkutnicka

HEAD & CHAIR PROFESSOR
Prof. Jintu Fan
范金土教授
DSc, PhD, Hon. FTI, FRSA

NORMAL DURATION
1 year

CREDIT REQUIREMENTS
30

TYPE OF FUNDING
Self-financed

MODE OF STUDY
Full-time

INTAKE NUMBER
26

Programme Aims

- We aim to produce creative, forward thinking designers who will develop their personal design identity, bringing a new perspective and offer to fashion through design conceptualization and creative application and informed decision making skills.
- The Programme is innovative, contemporary and aims to respond intuitively to the demands of a vibrant global fashion landscape.
- Close relationships and interaction with industry will provide an insight into the workplace and exciting career development opportunities for graduates.
- The study is intensive, fast paced, with sustainability firmly embedded at the core, within a design focused environment. The Programme fosters an analytical, critical and futuristic approach to learning, encouraging independent research and artistic expression.
- This MA will act as a platform to launch unique designers, with a sound understanding of the fashion business environment, into the fashion world. We aim to deliver highly sought after, ambitious design professionals.
- We aim to teach the future.

Programme Structure and Characteristics

Students may select one of the following specialist subject routes:

- Fashion Product
- Textiles
- Knitwear

Over two semesters, aspects of design thinking, prediction, aesthetics, 3D realisation, consumer behaviour, visual communication, industry practice, textile experimentation and technological innovation will be examined. Students will also enhance existing knowledge and support individual assignment work through research and practice.

Students are required to take all of the following subjects in order to graduate from the Programme:

3-credit subjects

- Creative Textiles
- Design Collection Preparation
- Design Concept
- Evolution of Design Trends
- Fashion Business
- Fashion Technology
- Visual Design Communication

9-credit project

- The Personal Project includes a written research report, individual design portfolio and a collection.

Throughout their study, students will be encouraged to develop independent learning skills and exchange ideas through guided experimentation. There will be the opportunity to work in groups on a real life industry project, as well as develop a final major project while engaging in research and design in studio practice. Guest speakers and industry visits will be arranged where appropriate and students will be encouraged to seek industry mentors and sponsors. Students will learn to appreciate the demands placed on designers in this dynamic industry, and explore issues related to design practice, technology and theory. They will continuously receive updated information and improve their knowledge of innovative, relevant technologies in an integrated design context. Students are encouraged to have a sense of self-direction in research and investigation work as well as develop relevant transferable skills.

Enquiry 查詢詳情

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Entrance Requirements

- A Bachelor's degree in textiles or fashion design, or the equivalent.
- Applicants who hold a Bachelor's degree in other fields of study and have adequate and relevant work experience in the fashion or textile industry may be considered for admission.
- If you are not a native speaker of English, and your Bachelor's degree or equivalent qualification is awarded by institutions where the medium of instruction is not English, you are expected to fulfil the following minimum English language requirement for admission purpose:
  - A Test of English as a Foreign Language (TOEFL) score of 80 for the Internet-based test, OR 550 for the paper-based test; OR
  - An overall Band Score of at least 6 in the International English Language Testing System (IELTS).

Notes :

- The programme welcomes applications from candidates from all over the world.
- Scholarships are available for outstanding candidates.
- The programme is taught in English; therefore, potential candidates must have an excellent command of the English language.
- Individual cases will be considered on their own merit by the Department. Applicants may be required to attend interviews or tests to further demonstrate their language proficiency.

Important : The leaflet was compiled in August 2018. Applicants are advised to visit the Academic Secretariat website for the latest information: www.polyu.edu.hk/study

INSTITUTE OF TEXTILES & CLOTHING

MA in Fashion & Textiles

服裝及紡織文學碩士學位

PROGRAMME CODE

14102

PROGRAMME LEADERS

Dr Chester To
杜堅民博士
MSc, PhD

Dr Liu Wing-sun
廖泳新博士
PhD

HEAD & CHAIR PROFESSOR

Prof. Jintu Fan
范金土教授
DSc, PhD, Hon. FTI, FRSA

NORMAL DURATION

1 year (full-time Fashion Merchandising)

1.5 years (full-time Global Fashion Management)

2 years (part-time)

CREDIT REQUIREMENTS

30

TYPE OF FUNDING

Self-financed

MODE OF STUDY

Mixed-mode

INTAKE NUMBER

50

Programme Aims

- To enable students to assimilate and integrate knowledge in business and management disciplines from globalising perspectives
- To further develop and enhance students' intellectual ability to tackle operation problems in worldwide fashion and textiles supply and distribute business
- To nurture students' potential and enthusiasm as active learners for their personal and professional development

Programme Structure

This programme is a taught graduate business degree, nurturing cosmopolitan executives and entrepreneurs in the converging worldwide fashion business.

The programme is structured as mixed mode (both full-time and part-time) that offers 30 credits in two focused specialisms, Fashion Merchandising (FM) and Global Fashion Management (GFM). Student can determine his or her own study timeframe.

Fashion Merchandising Specialism

- To provide students with integrated knowledge and practice concepts
- To facilitate them to meet the demands of fashion careers in the business manufacturing, wholesale, retail, and international trade sectors

Global Fashion Management Specialism

- To develop and entrepreneurial perspective on today's global fashion business environment
- To develop a deeper understanding of the ways in which the worldwide cultural convergence impacts in today's globalising business contexts

The GFM specialism is in collaboration with the Fashion Institute of Technology in New York (www.fitnyc.edu) and the Institut Français de la Mode in Paris (www.ifm-paris.com). Students who take this specialism are required to visit New York, Paris and Hong Kong (for intensive seminars and site visits two weeks in each city) during the course of study.

Entrance Requirements

- A Bachelor's degree in textiles or fashion (clothing) studies, or an equivalent qualification.
- Applicants who hold Bachelor's degree in other fields of study and have adequate and relevant work experience in the fashion or textile industry may be considered for admission.
- For the Global Fashion Management specialism, applicants are expected to have a minimum of three years of relevant work experience.
- If you are not a native speaker of English, and your Bachelor's degree or equivalent qualification is awarded by institutions where the medium of instruction is not English, you are expected to fulfil the following minimum English language requirement for admission purpose:
  - A Test of English as a Foreign Language (TOEFL) score of 80 for the Internet-based test, OR 550 for the paper-based test; OR
  - An overall Band Score of at least 6 in the International English Language Testing System (IELTS).

Notes:

Individual applications will be considered on their own merit. Applicants may be required to attend interviews or tests to further demonstrate their language proficiency.

Important : The leaflet was compiled in August 2018. Applicants are advised to visit the Academic Secretariat website for the latest information: www.polyu.edu.hk/study

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INSTITUTE OF TEXTILES & CLOTHING

BA (Hons) Scheme in Fashion & Textiles

服裝及紡織(榮譽)文學士學位組合課程

PROGRAMME CODE
14490

JUPAS CODE
JS3492

SCHEME DIRECTOR
Dr Yick Kit-lun
易潔倫博士
BA, PhD

HEAD & CHAIR PROFESSOR
Prof. Jintu Fan
范金土教授
DSc, PhD, Hon. FTI, FRSA

NORMAL DURATION
4 years

CREDIT REQUIREMENTS
123

TYPE OF FUNDING
Government-funded

MODE OF STUDY
Full-time

INTAKE NUMBER
92
(HKDSE and non-JUPAS applicants)

200
(Senior year place applicants)*

Programme Aims & Learning Outcomes

The general aim of the programme is to train competent professionals for the fashion business in textile, apparel, retailing, design and related organisations. These professionals will play an active role in the development of the fashion and textiles industry locally and internationally. In addition to their professional competencies, the programme will cultivate students' other essential competencies for today's society.

Programme Characteristics

Based on their desired career aspirations and academic performance, students have the option of pursuing studies in any one of the five following specialisms:

Technology

- Imparts students with knowledge on fashion products and production processes, and their applications in technical, economic, managerial and commercial contexts. The knowledge hones students into industry leaders in product development, process innovation and production management in the textiles and apparel industry.

Design

- Nurtures the creativity and design skills of students. Students will gain an awareness of current and emerging technologies in the fashion and manufacturing environments, as well as a better understanding of marketing and business practices.

Retail & Marketing

- Provides fundamental principles, contemporary practices, and operational knowledge of fashion retail and marketing; in particular, aims to develop the skills of students in defining, analysing, and solving business problems in fashion retail and marketing, from fast to luxury fashion, and of fashion sourcing, buying, market research, store management and distribution of fashion products in both local and international contexts.

Intimate Apparel & Activewear

- Provides essential academic and practical knowledge of intimate apparel and activewear including integration of design and technological aspects. The specialism offers a supportive and inspiring learning environment to students so that they can create imaginative designs by applying analytical and problem-solving skills. The specialism also encourages independent judgment and critical thinking in students for new areas of development in intimate apparel and activewear.

Knitwear Design & Technology

- Trains students to be competent in this highly specialised design profession. The essence of the training delivered lies in the merging of technology with design. Technology provides a solid foundation upon which design skills are built. In this respect, yarn and knitting technologies are the two major areas that comprise and enrich the design curriculum. Design is the primary component of this specialism. The technological element of this specialism differentiates knitwear designers from fashion designers.

* Admittees of the senior year of the programme can pursue studies in one of the six specialisms, namely Fashion & Textile Technology, Fashion & Textile Design, Fashion & Textile Marketing, Fashion Retailing, Intimate Apparel and Knitwear Design & Technology.

THE HONG KONG POLYTECHNIC UNIVERSITY
香港理工大學

INSTITUTE OF TEXTILES & CLOTHING
紡織及服裝學系

Entrance Requirements

For Entry with HKDSE Qualifications

The minimum entrance requirements to the Scheme are in line with the general entrance requirements of the University:

- Level 3 in English Language, Chinese Language, and two elective subjects (OR one elective subject & M1/M2); AND
- Level 2 in Mathematics and Liberal Studies.

Alternative Entry Routes for Normal First Year Admission

- For those who apply on the basis of A-Level qualifications:
  - E in 3 A-Level subjects OR E in 2 A-Level and 2 AS-Level subjects; AND
  - Satisfy the English Language Requirement stipulated by the University.
- For those who apply on the basis of International Baccalaureate (IB):
  - A minimum score of 24 with at least grade 4 in 2 Higher Level (HL) subjects; AND
  - Satisfy the English Language Requirement stipulated by the University.
- For those who apply on the basis of other qualifications:
  - An appropriate Diploma passed with credit or an appropriate Higher Certificate from a recognised institution; OR
  - An appropriate Associate Degree/ Higher Diploma from a recognised institution; OR
  - Holder of other non-local qualifications; AND satisfy the English Language Requirement stipulated by the University.

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Senior Year Place Applicants

- An Associate Degree or Higher Diploma in Fashion and Textile Studies or the equivalent.
- Design & Drawing Test and/ or Interview: Applicants for Design and Knitwear Design & Technology specialisms will be required to undergo a Design & Drawing Test and/ or attend an interview to assess their suitability for the programme. Applicants of other specialisms may be invited to take part in an interview.

Professional Recognition

Graduates with two years of relevant post-qualification experience can apply for Associateship of the Textile Institute (ATI), UK and Graduate Membership of the Hong Kong Institution of Textile and Apparel (GHKITA).

ITC Entry Scholarships for Outstanding HKDSE Students

Outstanding HKDSE admittees who attained an aggregate DSE score of 25 or above for the best 5 subjects and successfully admitted to this BA (Hons) Scheme are awarded a maximum of HK$25,000.

Important : The leaflet was compiled in August 2018. Applicants are advised to visit the Academic Secretariat website for the latest information, including admission score calculation mechanism: www.polyu.edu.hk/study