## FACULTY OF APPLIED SCIENCE & TEXTILES



PROGRAMME GUIDE 2021/22



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 304 students pursuing MPhil and PhD by research and around 2,206 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 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 appraised by the students.

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 General Research Fund 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.

## "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

Clarea Au Professor in Energy 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





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
MSc in Nutrition and Healthy Ageing (12058)* 營養與健康活齡理學碩士學位	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) 食測及認證分析科學(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



Head Professor Defeng Sun 孫德鋒教授 Chair Professor of Applied Optimization and Operations Research BS, 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	
<ul> <li>Specialism in Decision Science</li> <li>決策科學專業</li> </ul>	Part-time	
MSc in Data Science and Analytics (63027)* 數據科學及分析理學碩士學位	Mixed-mode	50
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



Head Professor Daniel Lau 劉樹平教授 Chair Professor of Nanomaterials *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
BSc(Hons) in Engineering Physics (Optoelectronics) (11439-OPT 工程物理學(榮譽)理學士學位(光電子學)	f) Full-time	34
Higher Diploma in Applied Physics (JS3014) 應用物理學高級文憑	Full-time	51



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)* 服装及紡織品設計文學碩士學位	Full-time	26
MA in Fashion and Textiles (14102)* 服装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		
<ul> <li>Specialism in Retail &amp; Marketing</li> <li>零售及市場學專業</li> </ul>		
<ul> <li>Specialism in Intimate Apparel &amp; Activewear</li> <li>內衣及運動服裝專業</li> </ul>		
Specialism in Knitwear Design & Technology     針維時裝設計及科技專業		
BSc(Hons) in Digital Fashion (14404)^ Articulation Programme for Local Senior Year Admissions) 數碼時尚(榮譽)理學士學位	Full-time	30

<sup>^</sup> This programme is offered subject to approval.

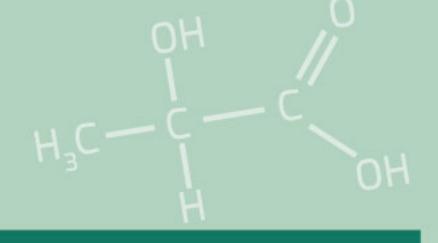
<sup>\*</sup> This programme is not government-funded; it is offered on self-financed basis.
The leaflet was compiled in August 2020. Applicants are advised to visit Academic Registry website www.polyu.edu.hk/study for latest information including admission score calculation mechanism.





PROGRAMME GUIDE 2021/22

# 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" in 2019

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, is 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
- A Drug Discovery and Traditional Chinese Medicine
- Cancer Research
- Organometallic Chemistry and Catalysis
- Renewable Energy and Sustainable Development
- X Chemical Imaging and Biosensing
- Food Safety and Technology

#### Our Research Platforms

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

# State Key Laboratory of Chemical Biology and Drug Discovery

化學生物學及藥物研發國家重點實驗室



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. In 2018, the Partner State Key Laboratory of Chirosciences was renamed as the State Key Laboratory of Chemical Biology and Drug Discovery.

# 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.

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.

## 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. The centre jointly researched a cancer drug (BCT-100) with Bio-Cancer Treatment International Limited (BCT) at the laboratory stage. Submitted by BCT, BCT-100 has became the Hong Kong's first Investigational New Drug (IND) approved by the US Food and Drug Administration. Besides that, it has also developed another cancer drug (BCA-PEG20) which 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 (HACCP Workshop) 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"
- A Gold Medal and Special Award, 2014 "Preparation of Food Grade Capsules with Targeted Drug Delivery"
- A Gold Medal and Special Award, 2013 "Novel Flavonoid Dimers for Reversing Cancer Drug Resistance"
- A 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"



Global Innovation Award at TechConnect, 2019



Thomson Reuters/Clarivate Analytics - Highly Cited Researchers (2015-2018)

### **Highly Cited Researchers List**

Our researchers were named in The Highly Cited Researchers list by Thomson Reuters/Clarivate Analytics (2015-2018), which identifies influential researchers who are having the greatest global impact on the scientific community with publications ranking among the top 1 % by citations for their field and year.

## 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 past years.

#### Other Research Awards

Our Researchers have received numerous awards on various occasions including the Global Innovation Award at TechConnect (2019), 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

(2018/19)

No. of research students : 41 (MPhil) 83 (PhD)

No. of on-going projects: 182

No. of papers in refereed journals: 244

# 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.

# 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 have joined 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 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 membership of the Hong Kong Chemical Society (HKCS) and the Royal Society of Chemistry (RSC) in the UK.

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 Presentation Award, Best Poster Oral Award and Travel Awards in Liver Week (2020, 2018, 2017), Best Oral Presentation Award at the 26th Symposium on Chemistry Postgraduate Research in Hong Kong (2019), 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 the 10th International Symposium on Nutritional Aspects of Osteoporosis (2017), and the Best Poster Award in Life Science (2nd Price) at the Sunney and Irene Chan Lecture in Chemical Biology (2017).



ABCT PhD student won the Best Oral Presentation Award in the 26th Symposium on Chemistry Postgraduate Research in Hong Kong in 2019



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

# MESSAGES FROM ALUMNI

# I would describe my past four years of study as a fruitful and wonderful adventure. The programme of Applied Biology with

Biotechnology has equipped me with comprehensive and up-to-date knowledge. Our lecturers and tutors are always approachable, they taught us the concepts and mechanisms during class and let us apply our knowledge during the practical sessions. The programme has also enabled us to apply what we have learnt to serving the community. We were given the opportunity to organise a campaign to promote the importance of a balanced and healthy diet to primary students in Tai O. The new curriculum encourages us to cooperate with others in a team-based environment, and this contributed to our all-round development.

Besides that, I was fortunate to have the experience of an overseas internship at McGill University in my third year, from which I gained insights into international science and the skills and techniques to better equip me for the future. I also enjoyed the sportsmanship of being a member of the PolyU Karatedo Team, our team had intensive training together to win the overall Champion of the USFHK Competition and have developed a close bonding and friendship.

### LEE Wing Lun

BSc(Hons) in Applied Biology with Biotechnology (Graduate of 2019 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. After graduated from HDCT, there is also opportunity for pursuing further study. I had became a freshman of BSc(Hons) in Chemical Technology programme at PolyU in 2017. 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.

## LAU Wing Yan Iris

BSc(Hons) in Food Safety and Technology (Graduate of 2019 with First Class Honours)

University life has always been the most fruitful time of youth. In these four years as an undergraduate student of Food Safety and Technology programme, the ABCT Department has offered us many courses of diverse topics to grasp professional knowledge and practical experiences regarding food safety and technology. Our lecturers would share their own experience and the most updated insight of the industry to get us prepared for our future career. Moreover, opportunities for overseas exchange and internship were often offered to us, which helped us to shape our future career path and broaden our horizons. Besides academic development, our university also values all-round development of students and organizes different volunteer activities. I volunteered in teaching English to some underprivileged students in Hong Kong during the 1st semester of my second year of study. This allowed me to equip interpersonal skills that could be applicable in various aspects in the future and became one of the most unforgettable memories during my university life.





Head	Professor Samuel C.L. Lo 盧俊立教授 Professor, BSc, PhD
Chair Professor &	Professor K.Y. Wong 黄國賢教授
Vice President	Patrick S.C. Poon Professor in Applied Chemistry,
(Education)	Chair Professor of Chemical Technology, BSc, PhD, FRSC, CChem
Chair Professor &	Professor W.T. Wong 黄永德教授
Dean of Faculty	Chair Professor of Chemical Technology, BSc, MPhil, PhD, ScD, FRSC, CChem, CSc
Chair Professor &	Professor Raymond W.Y. Wong 黃維揚教授
Associate Dean of Faculty	Clarea Au Professor in Energy
A CONTRACTOR OF THE CONTRACTOR	Chair Professor of Chemical Technology, BSc, PhD, FRSC, CChem
Associate Dean of Faculty	Professor M.S. Wong 黃文秀教授
	Professor, BSc, PhD



PROGRAMME CODE

12451

JUPAS CODE

JS3923

#### PROGRAMME LEADER

Dr Cheung Ching-mei, Chartia 張菁薇博士 BSc, MPhil, PhD

#### **HEAD & PROFESSOR**

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

## BSc (Hons) in Applied Biology with Biotechnology

應用生物兼生物科技(榮譽)理學士學位

## 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 and the first international accredited undergraduate programme by the Royal Society of Biology, UK. 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 broaden their perspectives.

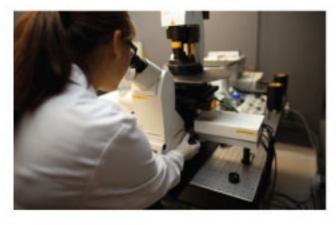


Real-time polymerase chain reaction

## 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. (e.g. University of Oxford, University of Cambridge, Harvard University, Monash University etc.)



## Professional Recognition

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









#### 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). GUR includes basic language requirements, leadership and intra-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 the 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 the 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.

- A 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
- 2 Community, Organization and Globalisation
- A 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
- Management & Organisation
- Consumer Behaviour





## **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;
- A 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
- Mathematics
- Biology
- Combined Science: Biology + Chemistry
- Combined Science: Biology + Physics

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
- A Health Care Practice
- A 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.

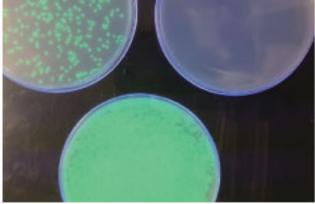
Important:

The leaflet was compiled in August 2020. Applicants are advised to visit Academic Registry website www.polyu.edu.hk/study for the latest information including admission score calculation mechanism.









## Enquiry 查詢詳情

MS CANDY LEUNG Tel 電話 3400 8690 Email 電郵 bccandy@polyu.edu.hk

URL 網址 www.polyu.edu.hk/abct







PROGRAMME CODE

12447

JUPAS CODE

JS3997

#### PROGRAMME LEADER

Dr Daniel Kam-wah Mok 莫錦華博士 BSc, PhD

#### **HEAD & PROFESSOR**

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

## BSc (Hons) in Chemical Technology

化學科技(榮譽)理學士學位

## 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 students' needs. Extra-curricular activities including industrial visits, summer job trainings and placements in local and overseas companies and universities 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 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 Royal Society of Chemistry (RSC) in the UK.





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







## About the Department

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

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 Cred	its
English for Scientific Commu	nication	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	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	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!	3
Analytical Chemistry II	分析化學॥	3
Analytical Chemistry II Laboratory	分析化學實驗॥	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!	1
Chemistry Laboratory II	化學實驗	2
Organic Chemistry I	有機化學!	3
Organic Chemistry II	有機化學Ⅱ	3
Organic Chemistry II Laboratory	有機化學實驗॥	2
Inorganic Chemistry I	無機化學!	3
Inorganic Chemistry II	無機化學॥	3
Inorganic Chemistry II Laboratory	無機化學實驗‖	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





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;
  - 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)

Elective Subjects	(Z) Credits)	
Subjects	No. of Cred	its
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
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

#### Interview

Group Interview will be held in June. Suitable candidates, preferably from Band A and B, will be invited for an interview to evaluate the potential and interest of applicants in the programme, and to test their communication skills.

## Preferred subjects with the Highest Weighting

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

English Language

Mathematics

Chemistry

Combined Science: Biology + Chemistry

Combined Science: Physics + Chemistry

Important:

The leaflet was compiled in August 2020. Applicants are advised to visit Academic Registry website www.polyu.edu.hk/study for the latest information including admission score calculation mechanism.







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

URL 網址 www.polyu.edu.hk/abct







PROGRAMME CODE

12454

JUPAS CODE

JS3349

#### PROGRAMME LEADER

Dr Wong Ho-yin, Marcus 黄浩賢博士 BSc, MSc, PhD

#### **HEAD & PROFESSOR**

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

# BSc (Hons) in Food Safety and Technology

食品科技與食物安全(榮譽)理學士學位

## Programme Aims & Characteristics

This government-funded full-time undergraduate programme is for 4 years. The aims are to provide a unique and profession-oriented education, and produce well-trained food technologists and food safety officers for the benefit of the society. The objective of the programme is to develop students into all-round graduates whose intellectual abilities, knowledge and skills are on par with 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 professionally designed curriculum, modern learning/ teaching methodologies, multiple assessment tools, workplace learning experience and extra-curricular activities.

Upon 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.



Talwan Academic Visit 2017

## 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!





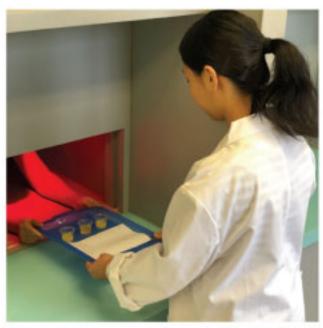


# Programme Structure & Content

This is a full-time programme for HKDSE graduates with a normal duration of four years. The programme is credit-based and students are required to complete at least 120 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) which are the basic language requirements, leadership and intra-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.





Sensory Laboratory

## Discipline-specific Core Subjects (72-75 Credits)

Subjects	No. of Cred	fits
English for Scientific Commu	nication	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!	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
Introduction to Food Science	初級食品科學	3
Biochemistry	生物化學	3
Human Physiology	人類生理學	3
Microbiology	微生物學	3
Organic Chemistry	有機化學	3
Food Chemistry	食物化學	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 Analysis	食物分析	3
Food Analysis Lab	食品分析實驗	1
Food Engineering and Processing I	食品工程及加工	3
Food Engineering and Processing I Lab	食品工程及 加工實驗 I	1
Food Engineering and Processing II	食品工程及加工Ⅱ	3
Food Engineering and Processing II Lab	食品工程及 加工實驗Ⅱ	1
Food Sanitation and Safety Management	食物衛生及 安全管理	3
Food Quality Assurance	食品質量保証	2
Project/ Research Project	課題/研究課題	3/6



## Discipline-specific Elective Subjects (15-18 Credits)

Subjects	No. of Cre	dits	
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	
Analytical Chemistry II	分析化學Ⅱ	3	
Microbial Biotechnology	微生物生物技術	3	
Food Product Development	食品研發	3	
Health Foods & Nutraceuticals	健康食品及 營養補充品	3	
Life Cycle Nutrition	生命期營養	3	
General Chemistry II	普通化學Ⅱ	3	
Environmental Science	環境科學	3	

## Career Prospects

Graduates of 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

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. In addition, students may attain the HACCP level 3 certificate during the studies.





Food safety seminar of international renowned scholar







## **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 Weighting:

English 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



Awards Presentation to student with outstanding academic performance

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

Important: The leaflet was compiled in August 2020.

Applicants are advised to visit Academic Registry website www.polyu.edu.hk/study for the latest information including admission

score calculation mechanism.



Field visit to Hong Kong Yakult Co., Ltd.

Field visit to Gate Gourmet (Flight catering in HK)



MS EVA NG Tel 電話 3400 8692 Email 電郵 eva.wy.ng@polyu.edu.hk









PROGRAMME CODE

12352

JUPAS CODE

JS3040

#### PROGRAMME LEADER

Dr Gary Kwong-chak Cheung 張光澤博士 BSc. PhD

#### **HEAD & PROFESSOR**

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

# HD in Chemical Technology

化學科技高級文憑



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 Cr	edits
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	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	3
Analytical Chemistry II	分析化學	3
Analytical Chemistry II Laboratory	分析化學實驗	1



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







## 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	1	
Chemistry Laboratory II	化學實驗=	2	
Organic Chemistry I	有機化學	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 :
  - Chemistry or Combined Science with Chemistry will need to complete Introduction to Chemistry;
  - Biology or Combined Science with Biology will need to complete Introductory Life Science;
  - 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

## 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

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) in 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
- Combined Science: Biology + Chemistry
- Combined Science: Physics + Chemistry

Important :

The leaflet was compiled in August 2020. Applicants are advised to visit Academic Registry website www.polyu.edu.hk/study for the latest information including admission score calculation mechanism.







## 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 Kim-hung Lam 林劍虹博士 BSc, PgD(Ed), MBA, MPhil, PhD

#### HEAD & PROFESSOR

Prof. Samuel Lo 盧俊立教授 BSc. PhD

NORMAL DURATION 2 years

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 experimental 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.









# 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 Prin	nciples for Testir	ng and Analysis	3
Experimental	Techniques in (	Chemistry	1
Introductory (	Cell Biology and	Biochemistry	3
Organic Cher	mistry		3
Analytical Sp	ectroscopy		3
Chromatogra	phic Analysis		3
Chromatogra	phic Analysis L	aboratory	1
Materials Scient	ence and Analys	sis	3
	al, Medicinal, Fo lodities Testing	od and	3
Advanced Ar	nalytical Techniq	ues	3
Advanced Ar	nalytical Techniq	ues Laboratory	1
Test Method	and Measurem	ent Uncertainty	3
Metrology an	d Calibration		3
Inspection an	nd Certification		3
Quality Mana	gement and La	boratory Accreditation	on 3
Microbiology	and Toxicology		3
Microbiologic	al Techniques		2
Capstone Pro	oject		3
Chinese Com	nmunication for	Science Professiona	als 2
English for So	cientific Commu	inication	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 2020. Applicants are advised to visit Academic Registry website www.polyu.edu.hk/study for the latest information.

## 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







PROGRAMME CODE

12057

#### PROGRAMME LEADER

Dr Ka Hing Wong 黄家興博士 BSc. MPhil, PhD

#### HEAD & PROFESSOR

Prof. Samuel Lo 盧俊立教授 BSc, PhD

NORMAL DURATION 1 year (Full-time)

CREDITS REQUIRED FOR GRADUATION

TYPE OF FUNDING Self-financed

30 credits

MODE OF STUDY Mixed-mode

INTAKE QUOTA 30

## 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 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

## 課程宗旨與特色

- 為有志於食品安全行業發展的畢業生 (主修科學/科技)提供獨有及專業的環 球食品安全管理及風險分析課程
- . 傳遞與環球食品安全有關的高端知識, 深入討論與全球食品安全有關的重大和 新近顯現的危害

## 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
- A Global Food Security
- Capstone Project

## 課程結構

學員必須修讀以下課程:

- 食品安全風險及分析
- 環球食品安全管理
- 《食品安全之應用和實踐》
- 國際食品標準、法例及法規
- 《食源性化學及微生物危害:個案研究》
- **》** 環球糧食安全
- 🙏 專題報告

## Programme Highlights

- A Graduates are qualified to obtain an official certificate on Risk Analysis Core Training issued by Joint Institute for Food Safety and Applied Nutrition (JIFSAN) and PolyU. JIFSAN is a Center of Excellence jointly formed by the United States Food and Drug Administration (USFDA) and The University of Maryland (UMD)
- Craduates are also qualified for official certificates on major Food Safety Management Systems 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

#### 課程重點

- 基 畢業生將獲得由美國食品安全和應用營養研究所(JIFSAN)和理大共同頒發的風險分析核心課程官方證書(JIFSAN是由美國食品藥品管理局(USFDA)和馬里蘭大學(UMD)聯合成立的卓越中心)
- 基 畢業生將獲得由國際認可的認證機構頒發 多項食品安全管理體系的證書
- 此課程將會由全球不同學者、專家及對處 理食品安全問題非常有經驗之從業員共同 教授







## **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.

## 入學資格

持有食品安全、食品科學、食品技術、公共衛 生或食品工業管理,或其他相關的學科的榮譽 學士學位的人士。



## Career Prospects 就業前景

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.

## Scholarship 獎學金

Two one-off entry scholarships of HK\$10,000, each will be granted to applicants with excellent academic achievements.

PolyU reserves the right to change or withdraw the scholarship at any time. In case of any dispute/disagreement, PolyU's decision is final.

## English Language Requirement 英語要求

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 學費

HK\$159,000 per programme



Important: This leaflet was compiled in August 2020. Applicants are advised to visit Academic Registry website www.polyu.edu.hk/study for the latest information.

## Enquiry 查詢詳情

MS KAY LO Tel 電話 3400 8812 Email 電郵 msc.foodsafety@polyu.edu.hk

URL 網址 www.polyu.edu.hk/abct Wechat Page 微信邀請函 https://h.eqxiu.com/s/6nhHWhIA Wechat Page 微信邀請函









PROGRAMME CODE

12058

#### PROGRAMME LEADER

Prof. Man-sau Wong 黃文秀教授 BSc. PhD

#### **HEAD & PROFESSOR**

Prof. Samuel Lo 盧俊立教授 BSc. PhD

NORMAL DURATION 1 year (Full-time)

CREDITS REQUIRED FOR GRADUATION

30 credits

TYPE OF FUNDING Self-financed

MODE OF STUDY Mixed-mode

INTAKE QUOTA 30

# MSc in Nutrition and Healthy Ageing

營養與健康活齡理學碩士學位

### Programme Aims & Characteristics

This programme aims to provide a unique and profession-oriented education opportunity for Bachelor degree holders with relevant background and produce well-trained nutritionists for the needs and benefits of the community, especially for the elderly service.

To provide a deeper insight to students to promote health education in Hong Kong, while taking up the responsibility to promote human health towards optimal nutritional status and disease prevention.

## 課程宗旨與特色

該課程旨在為具有相關範疇的大學畢業生提供獨 特和專業的教育機會,以培育專業的營養學家, 滿足社會需求,尤其是針對長者的服務。

為學生提供深入的知識,促進香港的健康教育,並同時承擔起促進人類健康以達致最佳營養狀況 和預防疾病的責任。

## Programme Highlights

- A unique applied nutrition programme addressing the ageing population needs of prevention and control of non-communicable diseases in Hong Kong;
- The first MSc nutrition programme in Hong Kong offering practicums in community settings;
- Curriculum design of the MSc programme is based on the UK Association for Nutrition (AfN) standard.

## 課程重點

- 獨特的應用營養課程,以應對香港因著人口老化、預防和控制非傳染性疾病的需求;
- 基 香港首個在社區環境中提供實習的營養理 學碩士課程;
- 課程根據英國營養協會(UK Association for Nutrition)標準設計。

## Programme Structure

- Advanced Human Physiology and Anatomy\*
- Food Preparation and Menu Planning
- Nutritional Assessment
- Public Health Nutrition
- Nutrition and Health for Older Adults
- Nutrition Education and Counselling
- 🙏 Research Methods & Data Analysis
- Mental Health and the Aged
- Practicum I
- Practicum II / Capstone Project

### 課程結構

- 👗 進階人體生理學與解剖學\*
- 🚨 食物準備和餐單設計
- 上 營養評估
- 公共衛生營養
- 之 老年臨床營養
- ※ 營養教育與輔導
- 研究方法與資料分析
- 👗 長者精神健康
- 之 實習!
- 🎎 實習 🛮 / 專題報告

#### Remarks

The addition of compulsory subject (") is subject to approval.









## **Entrance Requirements**

Bachelor's degree with honours in nutrition, food safety, food science, food technology, public health or other relevant / related disciplines.

## 入學資格

持有營養學、食品安全、食品科學、食品技術、 公共衞生或其他相關學科的榮譽學士學位。

## English Language Requirement 英語要求

Applicants who are not native speakers of English, or whose Bachelor's degree is awarded by institutions where the medium of instruction is not English, should fulfill 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).

## Career Prospects

Excellent job prospects are available to the graduates. They could work in public health and nutritional science within the health service, academia and in the food and nutrition industry.

## 就業前景

畢業生將有良好的就業前景。他們可在公共衛 生及營養領域從事保健、食品及營養等相關行 業及科研工作。

### Tuition Fee 學費

HK\$159,000 per programme



## Scholarship 獎學金

Two one-off entry scholarships of HK\$10,000, each will be granted to applicants with excellent academic achievements.

PolyU reserves the right to change or withdraw the scholarship at any time. In case of any dispute/disagreement, PolyU's decision is final.

Important :

The leaflet was compiled in August 2020. Applicants are advised to visit Academic Registry website www.polyu.edu.hk/study for the latest information including admission score calculation mechanism.

## Enquiry 查詢詳情

MS KAY LO

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Email 電郵 msc.healthyageing@polyu.edu.hk

URL 網址 https://polyu.edu.hk/abct

Wechat Page 微信邀請函 https://a.eqxiu.com/s/fJkdblC9





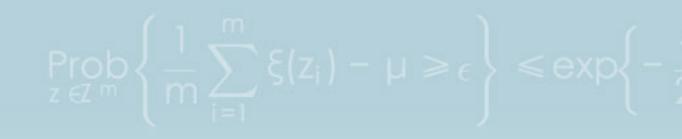
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## DEPARTMENT OF APPLIED MATHEMATICS





PROGRAMME GUIDE 2021 / 22



# ABOUT THE DEPARTMENT

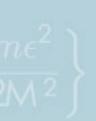


The Department of Applied Mathematics (AMA) is committed to quality teaching and research activities in mathematical science. We also contribute to the University by offering broad range of academic programmes and the supervision of research students. In addition, we provide courses to various faculties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

The academic programmes administered by the Department are as follows:

- A BSc (Hons) in Data Science and Analytics
- Au 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
- MSc in Data Science and Analytics

In 2020, PolyU is listed the world top 100 in the subject of Statistics and Operational Research by the QS World University Ranking Agency.



# 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 arranged to help develop students' global outlook and enrich their learning experience.

### Internship (Overseas and local)

With support from corporations and partners from different industries, the 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.

#### Qiwen HUANG

I took internship placement at Cracow University of Technology (Politechnika Krakowska) as a research assistant in the Faculty of Mathematics, Physics and Computer Science. Taking the overseas internship in Europe is challenging and meaningful for me.

During this 6-week internship, I gained a basic understanding of how to solve partial differentiation equation by Python and predict some practical trajectory problems by the idea of partial differentiation equation and Python. My adviser gave me a lot of freedom to figure out the research direction. I also attended his lectures and tutorials and learnt many essential knowledge which will benefit me for planning my future study and career. My internship offered me a chance to study and communicate with local students who introduced me the history and culture of Poland. I knew many new friends from all over the world and I did share my university life in Hong Kong with them.



# $\int \frac{1}{1+x^2} dx = \arctan x + C$

### 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.



#### Janice CHAN

My exchange journey at the South-Eastern Finland University of Applied Science was an amazing experience. It broadened my horizon and developed my awareness of things around us. Finland is well known for her education. It provides many discussion areas and practical exercises to student. Finland students are creative and always think out of the traditional box that I usually did. They also respected others' ideas and provided relevant responses. Having gone to a new place with different culture and language for exchange study, I had a chance to make friends from different countries. I tried to actively communicate with them in English and participated in many activities to learn more about the local culture. Through all these interactions, we have become good friends.

#### 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.

#### Vincent AU

I went on exchange at North Carolina State University (NCSU) for five months, the experience is doubtlessly the most meaningful and fruitful period in my life. It helps broaden my horizons and expand my social circles.

I made many friends in my dorm, which accommodates 150 residents from both local and overseas. They are all very nice persons and would actively approach each other in the dorm. We spent a lot of time together on studying, travelling and participating in various dorm activities, and built a strong bond just like a family. I'm very lucky to make so many close friends and so blessed to have received 'The Most Unforgettable Resident in Alexander Hall' Award (the greatest superlative among all) which is publicly voted by all residents. I also spent my leisure time on travelling through the states. The hot spots and the cultural difference between Hong Kong & USA have inspired me a lot. Thanks to NCSU students and all my Alexander Hall mates for making my exchange a fruitful one. They have changed me a lot and made my experience in USA special and unique. I would have done the same for everything if time had flied back to half a year ago, with no regrets.



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, Melbourne 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 Melbourne

#### 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

We join 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 provides 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.

In 2019, PolyU and the Academy of Mathematics and Systems Science (AMSS) of the Chinese Academy of Sciences (CAS) reinforces their research collaborations in Applied Mathematics and launches 'The CAS AMSS-PolyU Joint Laboratory of Applied Mathematics' (The Joint Lab).

By combining the strengths and expertise of PolyU and the CAS research institute, the Joint Lab showcases the synergies of CAS and PolyU and serves as an important platform for advancing knowledge transfer and applications as well as nurturing talents in applied mathematics in the Mainland China and Hong Kong. These collaborations will ultimately benefit the development of the Greater Bay Area and contribute to the economic development of the society.

#### Some Research Statistics

No. of research students : 6 (MPhil)
41 (PhD)

No. of on-going projects: 92 No. of papers in SCI journals: 157

(2019/20)

No. of SCI journals served as editors: 40

(2019/20)





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 enhanced my understanding of the China market.

The programme also helped me develop my ability to analyze and solve problems both of which will benefit me throughout my life.



## MESSAGES FROM ALUMNI

#### **Edward YEUNG**

Elstone Securities Limited

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

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

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.







	BSc, MS, PhD
Associate Heads	Professor Cedric Yiu 姚嘉暉教授 MSc, DPhil
	Professor Zhao Xingqiu 趙興球教授 PhD
Chair Professor	Professor Chen Xiao-jun 陳小君教授 Chair Professor of Applied Mathematics, MSc, PhD

Professor Sun Defeng 孫德鋒教授

Professor Qi Li-qun 祁力群榮休教授

Chair Professor of Applied Optimization and Operations Research, BS, MSc, PhD

Head & Chair Professor

Emeritus Professor



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

2 years (for Senior Year)

#### CREDITS REQUIRED FOR GRADUATION

At least 123 credits / 70 credits (for Senior Year, depending on the student's qualification] plus 2 training credits

TYPE OF FUNDING

Government-funded

MODE OF STUDY

INTAKE QUOTA

Full-time

19 [for JUPAS and non-JUPASI 13 [for Senior Year]

#### PROGRAMME TEAM

Dr Raymond Sze

BSc, MPhil, PhD

Dr Daihai He 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 decision making.
- To develop students' ability in quantitative analysis, financial data critical thinking analytics, communication skills, which will strengthen their data interpretation and analytical skills and support them to develop career in the evolved investment and finance industries.

#### Programme Elements

The programme includes the following key elements:



#### Work-Integrated Education (WIE)

A minimum of 120 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

#### Professional Recognition

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

- Hong Kong Securities and Investment Institute
- Hong Kong Statistical Society\*
- Royal Statistical Society of UK\*
- \* Please refer to 'Curriculum' of our webpage www.polyu.edu.hk/ama/ug/63426 for details. (subject to confirmation)

#### Entrance Scholarship for Local Outstanding Students

Local outstanding students who meet the selection criteria will be awarded a one-off entrance scholarship of various amount. Scan QR code below or refer www.polyu.edu.hk/ama/information/ama\_entr ance\_scholarship.pdf for details.









#### **Entrance Requirements**

JUPAS A	pplicants
HKDSE Subjects	Level Requirement
English Language* Chinese Language Two Elective Subjects (including M1/M2)	Level 3 or above
Mathematics* Liberal Studies	Level 2 or above
Admission Score Calc Best 5 subjects	ulation Mechanism:

<sup>\*</sup> Preferred subjects with the highest weighting

#### Non-JUPAS Applicants

University will consider other qualifications (e.g., A-Level / IB / other non-local qualifications) as being equivalent to the specified entrance requirements on their individual merits. Please refer to 'Study@PolyU' for details.

#### Senior Year Place Applicants

An appropriate Associate Degree or a Higher Diploma in Mathematics, Statistics, Science, Information Technology, Business Engineering from a recognised institution.



#### Interview Arrangement

The interview aims to test the potential for and interest of applicants in the programme, and their communication skills and general knowledge in finance.

#### JUPAS Applicants

Selected applicants will be invited to interviews prior to the announcement of HKDSE result in June/July 2021.

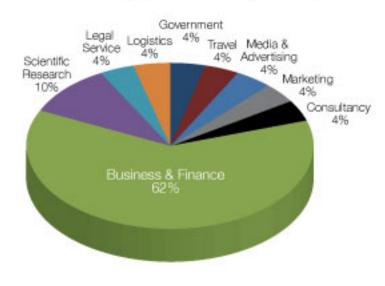
#### Non-JUPAS / Senior Year Place Applicants

Suitable applicants will be invited to individual / group interviews.

#### Career Prospects

This programme is designed to support graduates pursuing a variety of careers such as investment banking, management, risk management, financial data analysis, product development and pricing. Many of our graduates have found employment in prestigious financial institutions and renowned corporations throughout the Asia Pacific area.

#### Graduate Employment Statistics (2018/19\*)



\*Data is collected from graduates of BSc (Hons) in Investment Science, now renamed BSc (Hons) in Investment Science and Finance Analytics programme

Important: This leaflet was compiled in August 2020, Applicants are advised to visit Academic Registry website www.polyu.edu.hk/study for the latest information.





URL 網址 www.polyu.edu.hk/ama/ug/63426

Email 電郵 isfa.info@polyu.edu.hk

電話 2766 6946







DEPARTMENT OF APPLIED MATHEMATICS

BSc (Hons) in Data Science and 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

Normally 64 credits (plus 2 training credits for WIE)

TYPE OF FUNDING Government-funded

MODE OF STUDY

INTAKE QUOTA 25

PROGRAMME TEAM
Dr Ting-kei Pong
BSc, MPhil, PhD

Dr Binyan Jiang

Dr Raymond Sze BSc, MPhil, PhD

Dr Chun-Sing Leung BSc, BEng, MPhil, PhD

Dr Allen Tai BSc, MPhil, PhD



#### 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, and their applications to the management and 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 for 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 a total of 46 credits)

Probability and Distribution, Mathematical Methods for Data Science, Statistics for Data Science, Programming for Data Science, Decision Analysis, 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, Professional English for Data Science and Analytics Students, Professional Communication in Chinese for Data Science and Principles of Programming.

Admitted students with insufficient background in mathematics or/and programming are required to pass the subject(s) Calculus and Linear Algebra, Database Systems or their equivalents.

Elective Subjects (At least 3 subjects with a total of 9 credits)

Artificial Intelligence, Theory of Interest and Portfolio Analysis, Operations Research Methods. Econometrics, Optimization Methods, Web Application Design and Development, E-commerce Technology and Applications, Information Systems Audit and Control, Environmental Impact Assessment, Urban Planning (Workshops), Medical Informatics, Computational Methods, Stochastic Processes for Investment, Statistical Machine Learning, Algorithmic and High Frequency Trading, etc.







#### Entrance Requirements

A Higher Diploma or an Associate Degree in IT, statistics, engineering, science or business from a recognised institution.

#### Interview Arrangement

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

#### Entrance Scholarship for Local Outstanding Non-JUPAS Admittees

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

Hong Kong Statistical Society

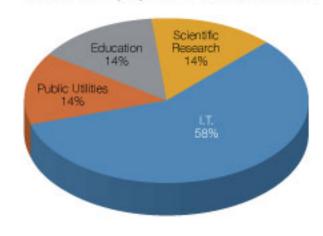
Royal Statistical Society of UK

#### Career Prospects

This programme is designed to train students with critical and innovative thinking skills associated with problem solving and decision making, aiming to help them solve emerging problems in different domains of application.

Our graduates pursue career in various industries, Information Technology related in particular. The job functions they held programming, include database management, software engineering and statistical/data analysis.

#### Graduate Employment Statistics [2018/19]



Important :

The leaflet was complied in August 2020. Applicants are advised to visit Academic Registry website www.polyu.edu.hk/study for the lastest information.





#### Enquiry 查詢詳情

URL 網址 www.polyu.edu.hk/ama/ug/63425

Email 電郵 dsa.info@polyu.edu.hk

Tel 電話 2766 6948



DEPARTMENT OF APPLIED MATHEMATICS

PROGRAMME CODE

63022

#### **SPECIALISMS**

Actuarial and Investment Science 精算及投資科學

Decision Science 決策科學

INTAKE QUOTA 60

# MSc in Applied Mathematics for Science and Technology

科技應用數學理學碩士學位

#### 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 software 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

30 credits

Graduation

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 : 30 credits

Credits Required for Graduation

oo diballo

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 management.

#### 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







#### **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

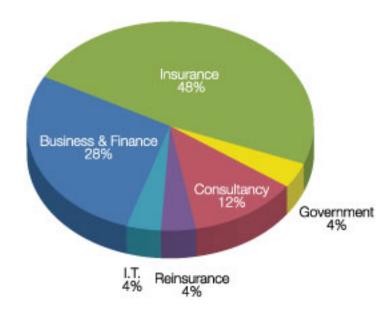
This programme has five subjects that are included in the Continuing Education Fund (CEF) list of reimbursable subjects (for course commencement before March 2023).

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 (2018/19)



Important :

Dr Xin Guo

Ms Jojo Au

Tel

Tel

電話 3400 3751

電話 2766 6949

Email 電郵 jojo.au@polyu.edu.hk

Email 電郵 x.guo@polyu.edu.hk

The leaflet was compiled in August 2020. Applicants are advised to visit Academic Registry website www.polyu.edu.hk/study for the latest information.

#### Enquiry 查詢詳情

Prof. Xiaoqi Yang

Tel 電話 2766 6954

Email 電郵 xiao.qi.yang@polyu.edu.hk

Dr Yijun Lou

Tel 電話 3400 3980

Email 電郵 yijun.lou@polyu.edu.hk

URL 網址 www.polyu.edu.hk/ama/pg/63022

Email 電郵 msc.ds.ais@polyu.edu.hk







DEPARTMENT OF APPLIED MATHEMATICS

### MSc in Operational Research and Risk Analysis 運籌及風險分析理學碩士學位

Prob  $\left\{\frac{1}{m}\sum_{i=1}^{m}\xi(i)\right\}$ 

PROGRAMME CODE

63024

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

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

CREDITS REQUIRED FOR GRADUATION 30 credits

TYPE OF FUNDING Self-financed

MODE OF STUDY Mixed-mode

INTAKE QUOTA 60





#### 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 our 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, finance industry and insurance.

#### 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 business 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.









#### 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.

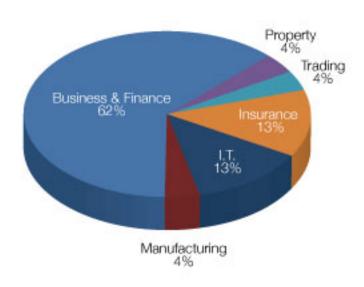
#### Other Information

This programme has four subjects that are included in the Continuing Education Fund (CEF) list of reimbursable subjects (for course commencement before March 2023).

#### 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 providers, retail, banking, insurance, procurement/ sourcing and supply chain functions, and modern financial product development and pricing.

Graduate Employment Statistics (2018/19)



Important :

The leaflet was compiled in August 2020. Applicants are advised to visit Academic Registry website www.polyu.edu.hk/study for

he latest information

#### Enquiry 查詢詳情

Prof. Xun Li

Tel 電話 2766 6939

Email 電郵 li.xun@polyu.edu.hk

Dr Xiang Yu

Tel 電話 2766 6930

Email 電郵 xiang.yu@polyu.edu.hk

Dr Zhi Zhou

Tel 電話 2766 7865

Email 電郵 zhi.zhou@polyu.edu.hk

Ms Jojo Au

Tel 電話 2766 6949

Email 電郵 jojo.au@polyu.edu.hk

URL 網址 www.polyu.edu.hk/ama/pg/63024

Email 電郵 msc.orra@polyu.edu.hk







DEPARTMENT OF APPLIED MATHEMATICS



## MSc in Data Science and Analytics

數據科學及分析理學碩士學位

PROGRAMME CODE

63027

#### NORMAL DURATION

1.5 years (Full-time\*) 3 years (Part-time)

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

CREDIT REQUIREMENTS

30 credits

TYPE OF FUNDING Self-financed

MODE OF STUDY

Mixed-mode

INTAKE NUMBER 50



In this era of big data, large data sets are generated every day in various areas in society and industry, such as internet data, social network data and financial transaction data. It is challenging to analyze this unprecedentedly large volume of data and extract information from it. To create values out of data, one inevitably has to combine techniques from mathematics, statistics and computer science. Graduates who have highly developed mathematical, statistical and computing skills are thus in great demand, both in industry and research globally.

Characteristics

Data Science and Analytics concerns the use of mathematical, statistical and computing techniques to extract useful information out of large-scale data and make decision out of it. It is widely recognized that Statistics, Optimization methods and Computer Science form the three pillars for modern Data Science. This programme is designed to provide a balanced treatment on these three pillars, with an aim of grooming future data analysts.

#### Programme Aims

- To nurture graduates with modern data science skills that cut across core disciplines of mathematics, statistics and computer science;
- To develop students' analytical and critical thinking, as well as problem-solving skills, which will enable them to pursue careers as data analysts in a broad range of industries e.g., finance, IT, telecommunication

#### Course Structures

- 6 compulsory subjects (18 credits), and 4 elective subjects (12 credits), OR
- 6 compulsory subjects (18 credits), 1 elective subject (3 credits) and a dissertation (9 credits)









#### **Entrance Requirements**

- Bachelor's degree with honours in mathematics, statistics, computer science, IT, engineering and science, or the equivalent
- Applicants with a Bachelor's degree in other disciplines and an adequate background in mathematics or IT will also be considered

#### 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:

- 90 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.

#### Career Prospect

This programme aims at producing graduates with an expertise that cuts across core disciplines of mathematics, statistics and computer science. It develops students' analytical and critical thinking, as well as problem-solving skills. This will enable the students to pursue careers as data analysts in various industries such as finance and information technology.

Important: The leaflet was compiled in August 2020. Applicants are advised to visit Academic Registry website www.polyu.edu.hk/study for the latest information.



Dr Zaikun Zhang

Miss Wai Yan Moon

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Email 電郵 zaikun.zhang@polyu.edu.hk

Email 電郵 wai-yan.moon@polyu.edu.hk

#### Enquiry 查詢詳情

Prof. Xingqiu Zhao

電話 2766 6921

Email 電郵 xingqiu.zhao@polyu.edu.hk

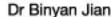
Dr Binyan Jiang

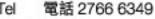
Email 電郵 by.jiang@polyu.edu.hk

URL 網址 www.polyu.edu.hk/ama/pg/63027

Email 電郵 msc.dsa@polyu.edu.hk





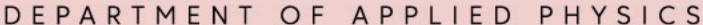


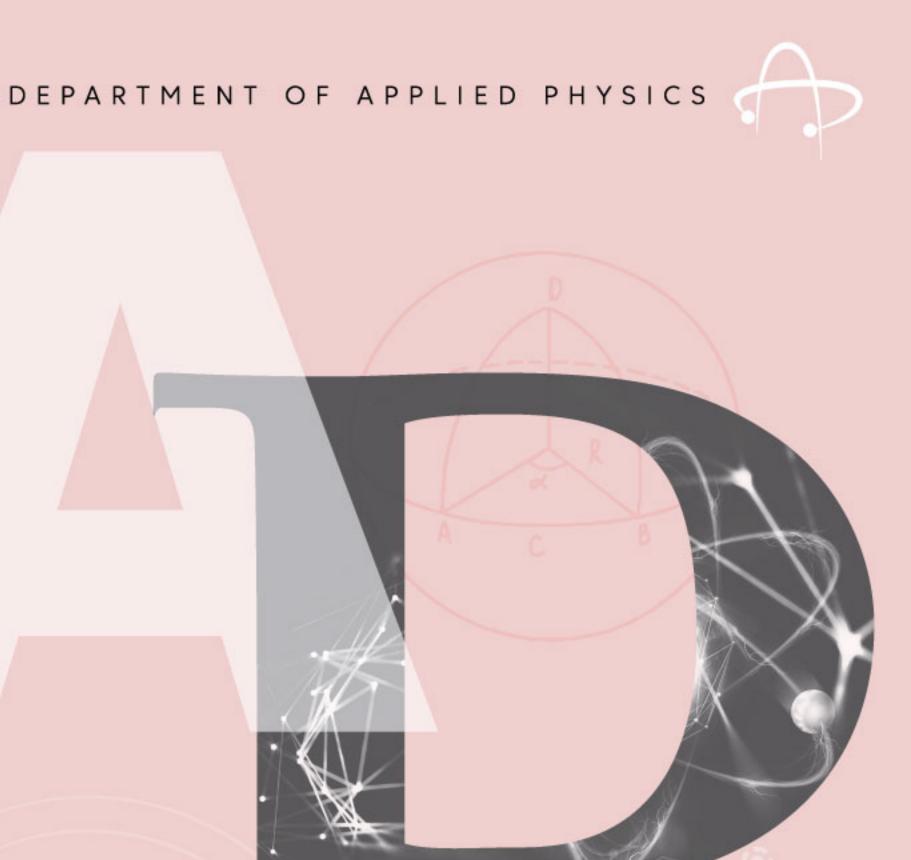












PROGRAMME GUIDE 2021 / 22

## 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.





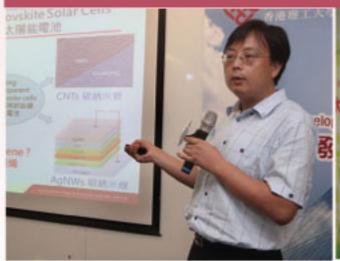
Our Higher Diploma in Applied Physics programme has a long-standing record of excellence and graduates are widely accepted by the industrial and commercial sectors. Many of our graduates are now in important executive positions. Last year, over 85% of our graduates proceed for further studies, such as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







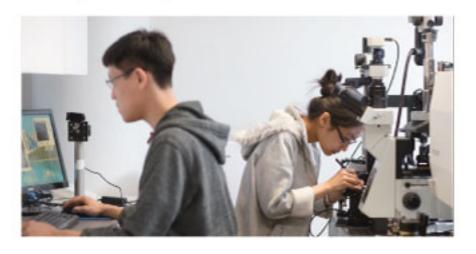
#### Major Research Areas

- Nanomaterials 納米材料
- Energy Materials and Devices 能源材料與器件
- Photonics, Plasmonics and Optoelectronics 光子學、等離激元光子學與光電子學

- 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:

13 (MPhil)
52 (PhD)

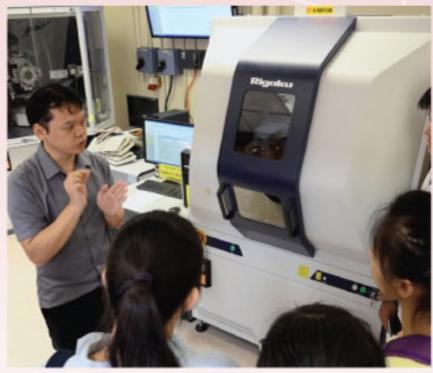
No. of research personnel:
62

No. of on-going projects:
67

No. of papers in refereed journals (per year):
197



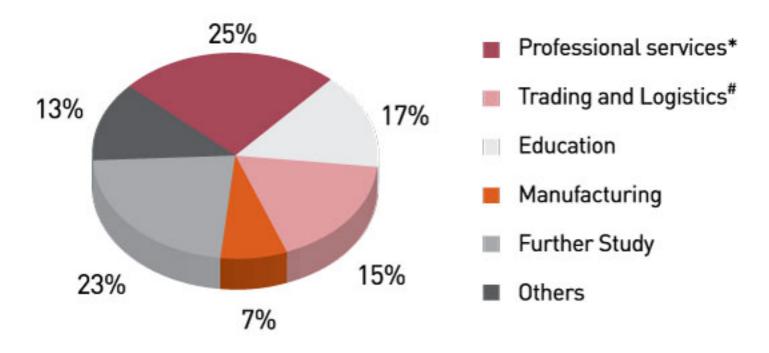




#### University Research Facility

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.

#### Graduate's Career Path (BSc (Hons) in Engineering Physics)



Our alumni are currently engaged in careers related to engineering and technology, medical imaging and healthcare, research and development, testing and certification, manufacturing, computing and IT, education, and public sectors. Some of our graduates pursue further studies either locally or overseas for higher degrees.

#### Remarks:

Result from 2019 Graduate Employment Survey, Student Affairs Office, The Hong Kong Polytechnic University.

\*Professional Services cover medical imaging, engineering, architecture and technical testing.

\*Trading & Logistics cover wholesale & retail, transport, storage and telecommunication.

## ACADEMIC & STUDENT ACTIVITIES



#### **Academic Advising**

To assist students with the start of university life, they will each be assigned an academic staff for advising them on study matters. Various discipline-related seminars and activities are also organized, providing them a glimpse of the importance of applied physics and the diversified career prospects of graduates.

#### 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 job market situation and career opportunities, we co-organize talks every year with the Alumni Association of our Department. Graduates working in various industries and ranks are invited to share their experiences in job hunting, interview skills 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.

#### 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。從四年前的青瀝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)

#### **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)

#### 祁冀

Graduate of BSc(Hons) in Engineering Physics

#### **QUAN Yuhui**

Graduate of BSc(Hons) in Engineering Physics

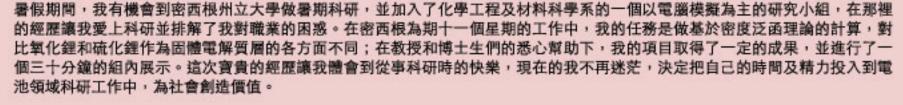
In the blink of an eye, I have finished my four years study at the Department of Applied Physics. I am grateful that the professors in the Department are caring and helpful. I enjoyed the study and discussion with my classmates. I also participated in the research project under supervision of our professors. 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)

#### **LAU Kwun Tak**

Graduate of HD in Applied Physics

Among all government-funded higher diploma programmes available in Hong Kong, the Higher Diploma in Applied Physics offered by PolyU is the most attractive one. I was impressed by its diversified and challenging curriculum. In addition to the interesting applied physics courses, I could also learn advanced mathematics such as linear algebra, calculus and statistics, which helped me build a strong foundation. My scope of knowledge was widened after taking the courses related to programming and material science. In the laboratory sessions, I got hands-on experiment skills and the know-how about compiling comprehensive laboratory report. With ample support from the patient and competent lecturers, I had a fruitful learning experience. The lecturers were very responsive and gave prompt feedback to students after each assessment, which enabled us to successfully achieve the learning outcomes. I strongly believe that my rewarding campus life was attributed to the superb learning environment provided by PolyU and the Department. On top of that, most students can successfully be admitted to bachelor degree programmes after graduation. So, I do recommend you to choose this programme and enjoy your campus life here!







Emeritus Professor	Professor Choy Chung-loong 蔡忠龍榮休教授 BSc, PhD
Associate Heads	Professor Hao Jianhua 郝建華教授 BSc, MSc, PhD
	Dr Leung Chi-wah Dennis 梁志華博士 BEng, PhD
Associate Dean of Faculty	Professor Kwok Kin-wing 郭建榮教授 BSc, MPhil, PhD

BSc, PhD

Professor Lau Shu-ping, Daniel 劉樹平教授

Chair Professor of Nanomaterials

Head & Chair Professor

₩ ...



### 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 Y.H. Tsang BSc, PhD

NORMAL DURATION 4 years

#### CREDIT REQUIREMENTS

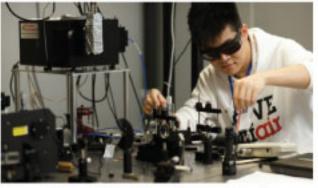
At least 125 credits (depending on student's HKDSE attainment)

#### TYPE OF FUNDING

Government-funded

MODE OF STUDY Full-time

INTAKE NUMBER 25



Undergraduate student performing laser experiment

#### Introduction

BSc in Engineering Physics is a unique program in Hong Kong. It equips our students with strong Physics background and engineering skills which enables them to apply Physics knowledge into a wide range of important technologies globally including medical imaging, material science, laser, ultrasound, nanotechnology, optoelectronic devices, computer interface, Al and programming etc. This programme aims at training undergraduates to pursue career in medical, science, technology and business or pursue postgraduate study in specialized areas in science and engineering.

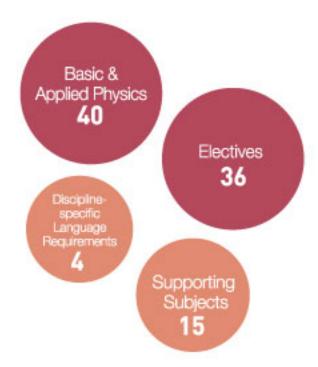
#### Programme Structure

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:

- General University Requirements (GUR): 30 credits
- Discipline-specific Requirements (DSR): 95 credits

#### Discipline-specific Requirements

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

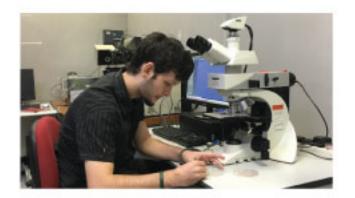


#### Basic and Applied Physics:

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

#### Electives:

Medical imaging, machine learning, lasers, optoelectronics, semiconductors, acoustics, computer simulations, nanotechnology, devices, radiation physics, 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-undergrad uate-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	

LIKDOE	Elective Subjects		
HKDSE Subjects	1st Elective	2 <sup>nd</sup> Elective or M1/M2	
Minimum Level Requirement	3	3	

The preferred subjects with the highest weighting for this programme are English Language, Mathematics, extended modules Mathematics (M1/M2), Physics, Combined Science: Biology + Physics, Combined Science: Physics + 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 傅真 2333 7629

Email 電郵 apdept@polyu.edu.hk





Facebook



Website

Instagram

#### 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 2<sup>nd</sup> 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 perforance 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-vin Memorial Scholarship

The leaflet was compiled in August 2020. Applicants are advised to visit Academic

Registry website www.polyu.edu.hk/study for the latest information including admission

score calculation mechanism.





## HD in Applied Physics

應用物理學高級文憑

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,累積超過四十年的辦學經驗
- ❖ 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
- ❖ 本地學士學位課程升讀率高達80%
- ◆ 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

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 English Language, Mathematics, extended modules of Mathematics (M1/M2), Physics, Combined Science: Biology + Physics, Combined Science: Physics + Chemistry

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









#### 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.

#### 學士學位銜接課程

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 傅真 2333 7629 Email 電郵 apdept@polyu.edu.hk







Website

Facebook

Instagram

#### 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

rnportant: The leaflet was compiled in August 2020. Applicants are advised to visit Academic

Registry website www.polyu.edu.hk/study for the latest information including admission

score calculation mechanism.



## INSTITUTE OF TEXTILES & CLOTHING





PROGRAMME GUIDE 2021 / 22





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



#### **CHUNG Wing-yi, Grace**

BA(Hons) Scheme in Fashion and Textiles (Technology)

I had a productive school life during my two year study in the senior year intake of the BA (Hons) Scheme in Fashion and Textiles - Fashion Technology. I learnt interesting topics in weaving, knitting, dyeing and finishing. However, I enjoyed the practical classes the most. I had the opportunity to produce fabric myself and gained a more in-depth understanding of fabric manufacture principles. Besides, I am fortunate to have had the opportunity to intern at Luk's Button Industrial Limited as an assistant in the quality assurance department. I understood more about the industry after my two-month stint at the factory. Also, my summer school experience at the Kyoto Institute of Technology was unforgettable. The experience broadened my horizons as I interactd with



international students and investigated traditional Japanese weaving craftsmanship. In my leisure time, I joined some of the activities offered by PolyU with my friends, including mountaineering and a hand knitting workshop. Through those experiences, I explored new things and achieved personal growth. To conclude, I am glad to have been an ITC student. I grew, learned and met life-long friends at ITC. I would highly recommend joining this programme if you are passionate about fashion and textiles, as you will gain a lot of valuable experience.



#### FAN Kam-wai, Isaac

Graduate of BA(Hons) Scheme in Fashion and Textiles (Intimate Apparel)

Studying at ITC was an amazing and unforgettable experience for me. During my four years of study, I learnt about fashion sketching, garment construction, fashion marketing, fashion technology, etc. Apart from academic studies, ITC also provides various off-campus learning opportunities to us. One of the most memorable experiences would definitely be my academic exchange to New York City. I learnt how the international fashion world operated by living in a foreign city for a semester and made friends from different countries. I was given the opportunity to be a dresser at the New York Fashion Week. Having the chance to study overseas was a really wonderful experience. It expanded my understanding of different cultures and at the same time, reminded me to always keep an open mind.

ITC equips its graduates with holistic technical skills and industrial knowledge. I had two internship opportunities in my final year. They were quite challenging and demanding. Nevertheless, I developed the all-round skills that are required by the fashion industry, such as problem solving and inter-personal communication skills, and a creative mind. My career path had a smooth beginning with the skillset and knowledge that I gained from ITC and my internship experiences.

I have always had a strong interest in fashion design ever since I was a kid. However, I struggled with my application to the ITC programme because my drawing skills were still immature at the time. When I was finally admitted to the programme, I realized that ITC welcomes anyone who loves fashion and is passionate about it. They treasure your intentions and attitude towards fashion more than your technical skills at the early admission stages. I always say that you are going to learn more fundamental skills before you pick your specialism and enter your senior year. Last but not least, if you are really interested in fashion, please do not hesitate to choose ITC of PolyU as it is the only institution that provides a formal university education in fashion.

## 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 are attached to 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 for our students to gain real life work experience and develop professional skills.

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



#### **Fashion Shows**

ITC organises fashion shows for our 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

Garments and textiles companies, fashion retailers and manufacturers provide recruitment talks to final year students at the end of the semester every year. This is an excellent opportunity for students to extend their network to the industry and prepare for the launch of their career in fashion and textiles.



### **FACILITIES**



ITC is equipped with various teaching workshops including Spinning, Weaving, Knitting, Dyeing & Finishing, Garment; 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, Research Center for Smart Wearable Technology, 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.

stimulate the learning and creativity of our students.







### MESSAGES FROM STUDENTS AND ALUMNI



#### CHEUNG Ka-wa, Samantha

Graduate of BA(Hons) Scheme in Fashion and Textiles (Intimate Apparel)

Going to university is a big change. It is a new place with new people and plenty of challenges. ITC has provided me with a platform to explore my interest in fashion through which I also further enhanced my knowledge. During the first two years at ITC, I studied fashion retailing. I was given the chance to present a business proposal along with my team members at the World Retail Congress in Dubai.

During the last two years of my study, I changed my major to Intimate Apparel Design and learnt new things. At the time, I was fortunate to be short-listed as a finalist in a lingerie design competition. Looking back at my time spent at ITC, I can see that I have been given many opportunities. My advice is to just work hard and enjoy it!



#### LAM Wing-sum, Minnie

BA(Hons) Scheme in Fashion and Textiles (Design)

Studying at ITC is a super busy but great experience, and there are so many opportunities to explore and learn outside campus. In the second semester of 2019, I went on a study exchange to the Amsterdam Fashion Institute and experienced learning in an entirely different design culture and studied different pattern making techniques. The study exchange not only enhanced my technical skills but also helped me to define my own design aesthetics.

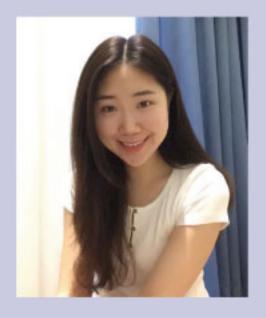
After returning to Hong Kong, I immediately started my internship at Fashionary. Throughout the internship, I did research on different fashion topics and events that impact the current trends. The research experience contributed to my knowledge of the garment industry and allowed me to better understand fashion history. I'm so grateful to have such opportunities to explore and discover more of the fashion world and my own self. ITC is a good choice if you want to learn outside of the box and connect to the fashion industry.

#### **HUANG Jia-xian, Kristine**

BA(Hons) Scheme in Fashion and Textiles (Retail and Marketing)

If you are ready to step into the fashion industry and inspired to pursue your hopes and dreams, then ITC will be the key springboard to your success. During the four years of your study, not only will you learn the basic sewing skills to make a complete garment, but also the relevant textile technology and fabric knowledge. You can also choose different streams that focus on learning aspects that align with your future aspirations, such as design, marketing, textile and even intimate apparel.

During the four-year study, you might encounter many obstacles or feel discouraged because of assignments or projects. It might be the first time that you stay overnight at school because you need to complete a visual merchandising project. Or you might have the opportunity to guide and then try your best to persuade the needy to complete a garment design. But every difficulty that you encounter will just help you grow and thrive in the future. At ITC, you can also enroll in one or more internship opportunities related to the fashion industry. The competitive stress that you may experience during the internship process will only prepare you well when you enter the workplace, and the internship would only bring you one step closer to your dreams. If you have the passion to pursue your fashion dreams, the ITC family will always open its doors to you.







Chair Professor of Fiber Science & Apparel Engineering DSc, PhD, Hon. FTI, FRSA Dr Tracy Mok 莫碧賢博士 Associate Head Associate Professor

Head & Chair Professor

Professor Jintu Fan 范金土教授

PhD, BEng Professor John H. Xin 忻浩忠教授 Chair Professors PhD, CCSDC, CMSDC, MHKITA

Lee Family Professor in Fashion and Textiles, Chair Professor of Textile Chemistry Professor Xiao-ming Tao 陶肖明教授 Vincent and Lily Woo Professor in Textile Technology, Chair Professor of Textile Technology

PhD, CText FTI, FHKITA, FASME





服裝及紡織(榮譽)文學士學位組合課程



PROGRAMME CODE

14490

JUPAS CODE

JS3492

#### SCHEME LEADER

Dr Chris Lo 盧君宇博士 PhD, B.Com

#### HEAD & CHAIR PROFESSOR

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

NORMAL DURATION

4 years

2 years for senior year place admission

CREDIT REQUIREMENTS 123

TYPE OF FUNDING Government-funded

MODE OF STUDY Full-time

INTAKE NUMBER

92 (HKDSE and non-JUPAS applicants)

170 (Senior year place applicants)\*

### Programme Aims & Learning Outcomes

The general aim of the programme is to train competent professionals for the fashion business in textiles, apparel, retailing, design and related organisations. These professionals will play an active role in the development of the global fashion and textiles industry in local and overseas markets. In addition to their professional competencies, the programme will also cultivate students' other essential competencies for today's business environment. They will possess personal excellence in leadership, teamwork, healthy lifestyle and lifelong learning; they will become trend leader, innovator, critical thinker and creative problem solvers; they will gain effective communication and interpersonal skills, and have high proficiency in biliteracy and trilingualism; and will become educated global and ethical leaders, promote social and national responsibility, engage in local and international affairs, acts as responsible global citizen, and exhibit cultural and aesthetic appreciation with global perspective.

#### **Programme Characteristics**

Based on desired careers and academic performance, students can pursue studies in one of the 5 specialisms under the BA Scheme:

#### Design

Design specialism nurture students' creativity and design ability, and this specialism develop their awareness of current and emerging technologies in the fashion and manufacturing environment and to promote an understanding of the supporting marketing and business practices.

#### Knitwear Design & Technology

This specialism is similar to that of the Design specialism in that it intends to nurture creativity and design ability. In addition to the general education, students also attain the essential knowledge and skills of a knitwear designer.



#### Retail & Marketing

This specialism equips students for global fashion business. Students will learn the fundamental management principles, contemporary practices and operational knowledge of global fashion retail and marketing. In particular, it will develop students' skills in defining, analyzing and solving business problems in fashion retail and marketing. from fast to luxury fashion, and from fashion accessories to lifestyle products. Emphasis will be placed on the aspects of fashion sourcing, buying, market research, branding, digital marketing, omni-channel distribution, social media analytics, store management and distribution of fashion products in both local and global contexts. This specialism will ensure that students attain the necessary professional skills to initiate and carry out individual and team research project. Students will also acquire managerial, analytical and problem-solving skills for business from local and overseas internships opportunities.

#### Intimate Apparel & Activewear

The aim of this specialism is to ensure that students have the necessary academic and practical knowledge of intimate apparel and activewear, including the integration of design and technology aspects. It provides students with a supportive and inspiring learning environment to create imaginative designs using analytical and problem-solving abilities. It also encourages students' independent judgement and critical thinking for the new development of intimate apparel and activewear. Students are guided to attain first-hand experience of the latest technologies, modern materials and industrial practice.

#### Technology

- Technology specialism nurture graduates who have sound knowledge of fashion products and production processes; who are able to apply their knowledge within a technical, economic, managerial and commercial context; who are flexible and can adapt and respond to change; and who have the potential to become industrial leaders in product development, process innovation and production management in textiles and apparel in local and global markets.
  - \* Admittees of the senior year of the programme can pursue studies in one of the five specialisms above. The credit requirements for senior year students range from 63 to 75. The exact credits required for each AD/HD holder depends on the approved credits transferred. Students not meeting the equivalent standard of the undergraduate degree Language and Communication Requirements (LCR), based on their previous studies in AD/HD programmes and their academic performance, will be required to take additional credits (6 credits in English and 3 credits in Chinese) on top of the required credits.







#### **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.
- Relevant Applied Learning (ApL) subject(s) can be considered for meeting the University entrance requirement. JUPAS programme will accept 1 ApL subject for meeting the entrance requirements. An attainment at Attained with Distinction (I) level or above is required. Performance of "Attained with Distinction (I)" is comparable to level 3 while "Attained with Distinction (II)" is comparable to level 4 or above of the Category A subjects of the HKDSE.

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.



Senior Year Place Applicants

An Associate Degree or Higher Diploma in Fashion and Textile Studies or the equivalent.

#### Design & Drawing Test and/ or Interview

Starting from 2021/22 admission, the design test and interview for JUPAS applicants are not required. Applicants are welcome to submit e-portfolio as supplementary information in support of their applications. This supplementary information is optional. Detailed arrangement and requirements of the e-portfolio submission will be announced to JUPAS applicants via their emails in June every year. The department may consider giving bonus score to those applicants with outstanding e-portfolios. For non-JUPAS applicants, interview/ test may be required for the shortlisted candidates.

#### 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 27 or above for the best 5 subjects and successfully admitted to this BA (Hons) Scheme are awarded a maximum of HK\$25,000 - HK\$35,000.

mportant:

The leaflet was compiled in August 2020. Applicants are advised to visit the Academic Registry website for the latest information, including admission score calculation mechanism: www.polyu.edu.hk/study



Follow us on



PolyUFashion



ITC GENERAL OFFICE

Tel 電話 2766 6500

Email 電郵 tcgeneral@polyu.edu.hk

URL 網址 www.polyu.edu.hk/itc







PROGRAMME CODE

14404

#### PROGRAMME LEADER

Dr Tracy Mok 莫碧賢博士 PhD, BEng

#### HEAD & CHAIR PROFESSOR

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

NORMAL DURATION 2 years

#### CREDIT REQUIREMENTS

60

(plus 0-9 LCR credits subject to student's language proficiency level or relevant training received in the sub-degree studies)

TYPE OF FUNDING Government-funded

MODE OF STUDY Full-time

INTAKE NUMBER 30

### BSc (Hons) in Digital Fashion

數碼時尚(榮譽)理學士學位

### Programme Aims & Learning Outcomes

In the digital era, young generations are highly reliant on social media, internet and smartphones in every aspect of life, resulting in a drastic change in consumer behaviours. Likewise, digital technologies are transforming the fashion industry's capacity in every stage of fashion from concept design to clothing rail. Hong Kong as an International Fashion Design Hub is in need of young talents with strong digital skills to drive efficiency and innovation for the evolving fashion business industry.

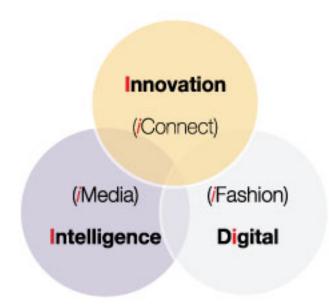
To cope with the changing consumer landscape and to fulfil the developmental needs of the fashion industry, this programme aims to impart students with a solid and holistic knowledge of new emerging technologies and digital fashion, innovative marketing/business strategies and plans. It will also equip students with advanced digital skills for fashion product development, communication and business development in the digital era. Graduates would be able to pursue a variety of career in the fashion and related industry such as a specialist/professional in creative content marketing, digital media, creative/corporate communications, and business strategy and transformation for fashion brands.

#### Programme Characteristics

The programme is a 2-year multidisciplinary full-time top-up degree programme.

This programme is characterized by 3i: iFashion, iMedia and iConnect, clustering subjects in 3 areas, training students with three distinctive attributes, viz. advanced digital skills for fashion creation (iFashion), advanced digital skills for fashion media communication & market analytics (iMedia) and the ability to connect fashion & textile processes and emerging technologies for product and business innovation (iConnect). Student will be equipped with the 3i upon successful completion of the programme.

The programme also places emphasis on both theory and practice. Problem-based or project-based teaching is the key approach for the programme delivery, where the programme is integrated with capstone projects that students are required to apply the learned



skills to solve real business problems in fashion industry. Furthermore, a wide range of elective subjects are included in the curriculum to help students with different academic backgrounds to achieve the indented learning outcomes with well-designed study pathways with broadened knowledge spectrum.

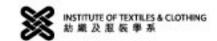


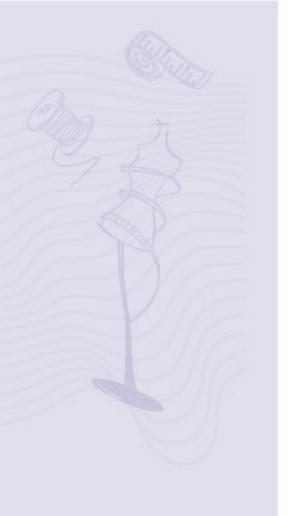
#### **Entrance Requirements**

Applications are welcome from the holder of an Associate Degree or a Higher Diploma, or the equivalent, in the following fields of study:

- Engineering
- Information Technology
- Media Communication
- Fashion
- Marketing







#### **Enhanced Learning Experience**

The programme is well structured so as to maximise students' opportunities to take part in different learning activities for an enriched learning experience.

- Student Exchange Programme Taking advantage of ITC's well-established academic partnership. exchange students can participate in credit bearing student exchange programme at their selected partner university in semester 2 of their first year of study. The credit earned overseas can be counted toward PolyU to fulfill graduation requirements (depending on subject relevancy and approval of credit transfer). Leading academic partners of ITC includes Cornell University, North Carolina State University, Fashion Institute of Technology, London College of Fashion, Manchester University and so forth.
- Internship Each year, ITC will work with local and overseas well-known fashion firms to offer students well-structured and project-based internship trainings.

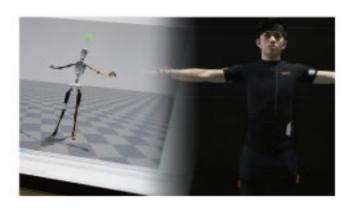
#### Professional Recognition

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). (subject to approval)

#### Entry scholarships

An entrance scholarship is set up by the Vincent & Lily Woo Trust to award students with outstanding academic performance joining the programme.





#### Career Prospects

Graduates who have been trained up with strong digital skills in media communication and creative minds for innovative business models/strategies have excellent career prospectus. Our graduates can choose to work not only for the fashion industry but also for other supporting sectors like the media, advertising and promotion, marketing, IT solution providers, in various capacities such as:

- App designers
- Creative artists
- Creative developers
- Creative technologists
- Digital account executives
- Digital/graphic designers
- Digital designers/editors
- Digital entrepreneurs
- Digital product managers
- Digital product technologists
- Digital strategists
- Front-end developers
- Game/character designers
- Image stylists
- Interactive designers
- loT/Smart product developers
- Photographers
- PR/online coordinators
- Social media managers
- UX developers
- Videographers
- Web developers

Remarks: This programme is offered subject to approval

for admission in 2021-22.

Important: This leaflet was compiled in August 2020.

Applicants are advised to visit Academic Registry website www.polyu.edu.hk/study for

the latest information.

#### Enquiry 查詢詳情

ITC GENERAL OFFICE

Tel 電話 2766 6500

Email 電郵 tcgeneral@polyu.edu.hk

URL 網址 www.polyu.edu.hk/itc





PolyUFashion







## MA in Fashion & Textile Design

服裝及紡織品設計文學碩士學位



14097

PROGRAMME LEADER

Ms. Basia Szkutnicka

HEAD & CHAIR PROFESSOR

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

NORMAL DURATION

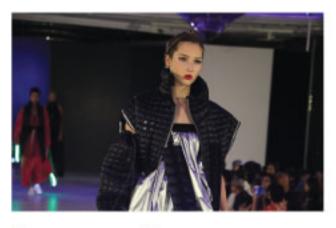
1 year

CREDIT REQUIREMENTS 30

TYPE OF FUNDING Self-financed

MODE OF STUDY Full-time

INTAKE NUMBER 26



#### Programme Aims

- We aim to produce creative, skilled and forward thinking individuals who upon graduation will be industry ready. With a focus on research to develop design conceptualization, students will examine their personal design identity through informed practice and creative application. Our talented graduates bring a fresh perspective to an ever changing fashion industry.
- 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

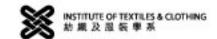
- Creative Textiles
- Design Collection Preparation
- Design Concept
- Evolution of Design Trends
- Fashion Business
- Fashion Technology
- Visual Design Communication

#### 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 methods and exchange ideas through guided experimentation. They will identify and explore their individual design D.N.A and develop a final major research project through intensive design development, research and studio practice. Guest speakers and industry visits will be arranged where appropriate, and students will be encouraged to look for industry mentors and sponsors. Students will learn to appreciate the demands placed on designers in this dynamic industry, while exploring issues of design practice, technology and theory. They will continuously update their knowledge and understanding of innovation in relevant technologies within an integrated design context. Students will be encouraged to apply a sense of autonomy through investigation and research as well as to develop relevant transferable skills.



#### **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.
- 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 2020. Applicants are advised to visit the Academic Registry website for the latest information. www.polyu.edu.hk/study

#### Enquiry 查詢詳情

ITC GENERAL OFFICE

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PolyUFashion







## 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 MSc, PhD

Dr Rachel Yee 余惠儀博士 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



#### Programme Aims

- To enable students to integrate and apply knowledge of fashion and textiles business in globalising perspectives.
- To enhance students' intellectual ability to tackle problems of worldwide fashion supply and distribution.
- To nurture students' potential and enthusiasm as active learners.

#### Programme Structure

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

The programme is run as a mixed mode (both full-time and part-time) that requires 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

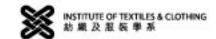
#### Global Fashion Management Specialism

- 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 two-week site visits 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:

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