



THE HONG KONG  
POLYTECHNIC UNIVERSITY  
香港理工大學

# ACADEMIC AND RESEARCH EXCELLENCE FOR IMPACT





# OUR MOTTO

TO LEARN  
AND TO APPLY,  
FOR THE BENEFIT  
OF MANKIND

The Hong Kong Polytechnic University (PolyU) aspires to be an innovative world-class university with a strong sense of social responsibility, driven by its motto, "To learn and to apply, for the benefit of mankind". The University provides the best holistic education to nurture socially responsible leaders of tomorrow who possess a strong sense of national identity and a global perspective, and pursues impactful innovation and interdisciplinary research to address the world's most pressing challenges. A robust culture of knowledge transfer and entrepreneurship is a cornerstone of the University, ensuring PolyU's technologies are transformed into practical real-world applications. The University's unwavering commitment to excellence has earned it international recognition, with PolyU consistently ranking among the top 100 universities worldwide. Based on this solid foundation, the University will continue to make positive contributions in collaboration with its strategic partners for the betterment of Hong Kong, the Nation, and the world.

## GLOBAL RANKINGS

65<sup>th</sup>

QS World  
University Rankings  
2024

87<sup>th</sup>

THE World  
University Rankings  
2024

26<sup>th</sup> QS Asia  
University Rankings  
2023

14<sup>th</sup> THE Asia  
University Rankings  
2023

82<sup>nd</sup> QS World  
University Rankings:  
Sustainability 2023

6<sup>th</sup> THE World's  
Most International  
Universities 2023

6<sup>th</sup> QS Top 50 Under 50  
2021

4<sup>th</sup> THE Young  
University Rankings  
2023



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**PolyU's relentless pursuit of excellence in education and research has earned us a spot among the top 100 universities worldwide.**

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## CHAIRMAN'S MESSAGE

### A LEGACY OF MAKING A DIFFERENCE IN SOCIETY

PolyU has come a long way since its inception in 1937. From its beginnings as a post-secondary technical school to becoming a full-fledged university in 1994, PolyU and its predecessors have played a crucial role in the social and economic development of our society. With a global alumni network of over 477,000 graduates, the University has fostered numerous distinguished leaders spanning various professions, industries, businesses, and communities, who have made a positive impact on the world.

Today, PolyU's relentless pursuit of excellence in education and research has earned us a spot among the top 100 universities worldwide. Over the years, the University has also made remarkable breakthroughs, including developing innovations to support our country's historic space missions, such as the Nation's first lunar sample return mission, Chang'e-5, and first Mars exploration mission, Tianwen-1.

As PolyU's Council Chairman and a proud alumnus, I have had the privilege of witnessing our remarkable progress. This journey has been made possible by the support of the local and central government as well as our dedicated council members, management team, staff, scholars, alumni, students, partners, and friends, and I am grateful for their steadfast contributions.

Moving forward, PolyU remains committed to growing alongside Hong Kong and playing a pivotal role in the scientific and technological development of the Greater Bay Area, the Nation and beyond, adhering to its motto, "To learn and to apply, for the benefit of mankind." With an unwavering focus on the betterment of society, we will continue to nurture leading talent and drive innovation to foster a brighter future.

**Dr Lam Tai-fai**, GBS, JP  
Chairman of Council

## PRESIDENT'S MESSAGE

### ACADEMIC EXCELLENCE FOR SOCIETAL IMPACT

For over eight decades, PolyU has strived to live up to our motto, "To learn and to apply, for the benefit of mankind." This guiding principle is reflected in our holistic education, which nurtures students to become successful professionals and leaders with a deep affection for their family and nation, a global perspective, and a strong sense of social responsibility.

It is also reflected in the passion of our scholars and scientists to address society's most pressing challenges through impactful research and embracing a strong culture of knowledge transfer and entrepreneurship. By translating their research breakthroughs into practical solutions for industries, businesses, and communities, they enhance the sustainability and prosperity of our world.

In addition, as a university with a reputation for excellence in Engineering and Technology, as well as our unique disciplines among the eight publicly funded universities in Hong Kong, such as Design, Fashion and Textiles, Hotel and Tourism Management, Rehabilitation Sciences, and Optometry, we are well-positioned to continue driving innovation and contributing to the development of Hong Kong as an international innovation and technology centre in the Greater Bay Area, as well as the socio-economic advancement of our country and the global community.

I am confident that with the continued backing of the Nation, the Hong Kong Government, our benevolent donors, esteemed alumni, industry collaborators, academic partners, and numerous other stakeholders across various sectors, we will continue to elevate our position as an innovative world-class university that directly meets evolving societal needs.

**Professor Jin-Guang Teng**  
President

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**We will continue to elevate our position as an innovative world-class university that directly meets evolving societal needs.**

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## A PROUD HISTORY, A PROMISING FUTURE

PolyU is fundamentally linked with the development of Hong Kong. Over the years, the University has played an important role in the different stages of social and economic development of our community, helping to propel progress in Hong Kong, the Nation and the world.



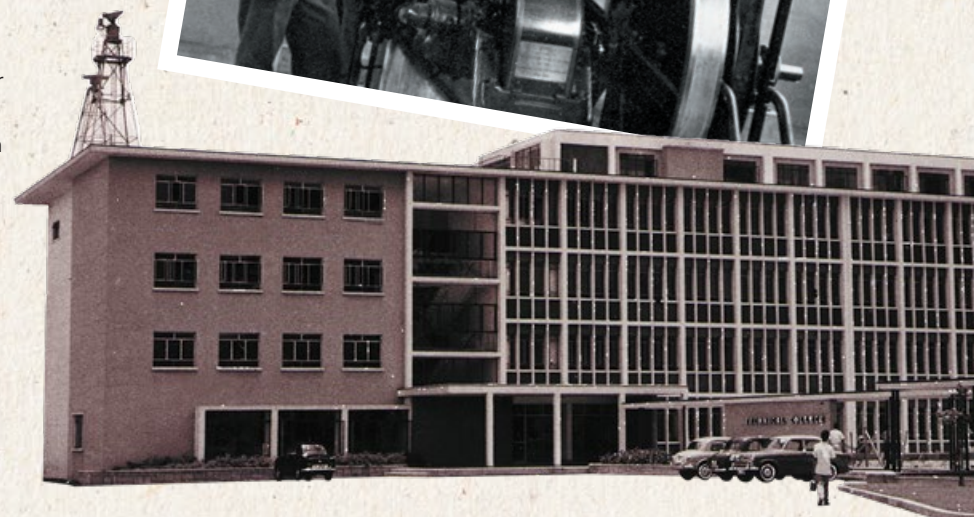
### 1937 GOVERNMENT TRADE SCHOOL

PolyU has its origin in the development of local technical education in the years preceding World War II. The **Government Trade School**, the University's first predecessor, opened on Wood Road in Wanchai in 1937 and was the first publicly funded post-secondary technical institution in Hong Kong. Around 70 students filled classes run by three departments offering courses in marine wireless operating, mechanical engineering and building construction.



### 1947 HONG KONG TECHNICAL COLLEGE

Renamed the **Hong Kong Technical College** after World War II, the institution offered both full- and part-time courses to meet the soaring demand for trained technicians and professionals. The year 1957 saw the opening of new premises in Hung Hom, signifying the beginning of a new chapter in industrial education in Hong Kong.



### 1994 THE HONG KONG POLYTECHNIC UNIVERSITY

The Polytechnic gained approval from the University and Polytechnic Grants Committee for the self-accreditation of degree programmes. On 25 November 1994, the institution assumed full university status, with its name changed to **The Hong Kong Polytechnic University** and the University's new logo was formally introduced.



#### POLYU TODAY

PolyU is ranked among the world's top 100 universities today, inspiring all its members to excel in their aspirations, living up to the University's motto: **"To learn and to apply, for the benefit of mankind"**. With an aspiration to drive positive impact and a heart to serve, PolyU continues to stay at the forefront of education and research, further pushing the boundaries of knowledge and innovation.



### 1972 HONG KONG POLYTECHNIC

The **Hong Kong Polytechnic** was formally established, with a mandate to provide professional education to meet the community's workforce needs. Early Polytechnic courses covered engineering, commerce, management, mathematics, science, nautical studies and textiles.

The campus underwent several phases of development to accommodate the ever-expanding number of academic programmes and student population, and the iconic "red brick castle" architecture began to take shape in 1976.



FACULTIES/SCHOOLS

**IDEAS** Faculty of Business  
Innovation-driven Education and Scholarship 工商管理學院



FACULTY OF CONSTRUCTION AND ENVIRONMENT  
建設及環境學院



FACULTY OF ENGINEERING  
工程學院  
WHERE CONCEPTS BECOME REALITY



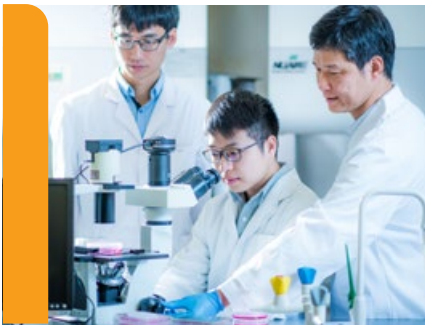
醫療及社會科學院  
Faculty of Health and Social Sciences



Faculty of Humanities  
人文學院



FACULTY OF 理學院  
SCIENCE



**PolyU Design**



School of Fashion & Textiles  
時裝及紡織學院



**shtm**  
SCHOOL OF HOTEL & TOURISM MANAGEMENT



GRADUATE SCHOOL

**GRADUATE SCHOOL**  
研究生院

The Graduate School (GS) at PolyU plays a crucial role in planning, managing, and ensuring the quality of our research postgraduate (RPg) education. With top-quality RPg programmes across nine Faculties/Schools and joint PhDs with leading universities, the GS fosters interdisciplinary research collaboration among students, academia, and industry to address the changing needs of Hong Kong, the Nation and the world.

SUBJECT RANKINGS

**QS** WORLD UNIVERSITY RANKINGS

by Subject 2023

- 12<sup>th</sup> Hospitality and Leisure Management
- 16<sup>th</sup> Architecture and Built Environment
- 20<sup>th</sup> Art and Design
- 22<sup>nd</sup> Civil and Structural Engineering

**THE** WORLD UNIVERSITY RANKINGS

by Subject 2023

- 27<sup>th</sup> Business and Economics
- 40<sup>th</sup> Engineering
- 68<sup>th</sup> Social Sciences
- 73<sup>rd</sup> Arts and Humanities
- 79<sup>th</sup> Computer Science

**U.S. News** & WORLD REPORT

by Subject 2022

- 2<sup>nd</sup> Civil Engineering
- 6<sup>th</sup> Engineering
- 14<sup>th</sup> Mechanical Engineering
- 25<sup>th</sup> Social Sciences and Public Health

**SHANGHAI RANKING**

by Subject 2022

- 1<sup>st</sup> Hospitality and Tourism Management
- 4<sup>th</sup> Civil Engineering
- 4<sup>th</sup> Management
- 5<sup>th</sup> Transportation Science and Technology

**CoinDesk**

- 1<sup>st</sup> Best Universities for Blockchain 2022

1<sup>st</sup> Ranked first in Hong Kong



# WHOLE-PERSON EDUCATION



## NURTURING BRIGHT MINDS WHO CONTRIBUTE TO THE WELL-BEING OF SOCIETY

At PolyU, we strive for a holistic learning experience, nurturing future professionals and leaders with a deep affection for their family and Nation, a global outlook, and a strong sense of social responsibility, so that they can contribute to the long-term development of Hong Kong, the Nation, and the world.

### 160+

Programmes

on offer in 2023/24

### 28,400+

Annual Student Enrolment

in 2022/23 (as of 31 October 2022)

### 9,800+

Annual Number of Graduates

in 2022/23



# WORLD-CLASS EDUCATION

PolyU is committed to providing students with world-class education, reflected in the University being ranked among the top 100 institutions globally by prestigious organisations such as QS, Times Higher Education, and U.S. News & World Report. Moreover, PolyU is a leading university in a range of disciplines, including hospitality and leisure management, art and design, civil and structural engineering, social sciences and public health, to name just a few.



## ENRICHING STUDENTS' LEARNING JOURNEY WITH COMMUNITY & HANDS-ON EXPERIENCES

PolyU's community-based and practical learning experiences enhance students' confidence and passion to make a tangible impact wherever they are.



### NURTURING SOCIALLY RESPONSIBLE GRADUATES VIA SERVICE-LEARNING

We were the first local university to make social responsibility and civic engagement a core component of our undergraduate education. We offer over 70 Service-Learning subjects taught by more than 30 academic units, educating students about social issues and enabling them to apply their classroom knowledge in service to the community.

Since 2012, our Service-Learning initiative has enrolled more than 37,900 students, contributing over 1.51 million hours of service to communities in Hong Kong, Mainland China and Taiwan, and overseas in countries such as Cambodia, India, Indonesia, Japan, Kazakhstan, Kyrgyzstan, Myanmar, Philippines, Rwanda, South Africa, Thailand and Vietnam.

Our students have been:

- Performing much-needed eye exams for underprivileged youth.
- Installing solar panels to light up entire communities.
- Providing clean drinking water by setting up water filtration systems.

### ENHANCING COMPETENCIES THROUGH WORK-INTEGRATED EDUCATION

To enrich students' professional readiness to serve the world around them, PolyU became the first university in Hong Kong to offer a mandatory Work-Integrated Education programme for undergraduates. The programme broadens students' practical experience and global perspective through internships in Australia, Mainland China, Greece, Hong Kong, Italy, South Korea, the UK, New Zealand, Singapore, South Africa, Taiwan, Thailand, and more.





# NURTURING TALENTED CHANGEMAKERS



PolyU is committed to empowering students to become future leaders who can inspire positive social change while embracing their unique skill sets—whether in tech, research, sports, arts, STEM, and more.



## HARNESSING EMERGING TECH CAPABILITIES

Our newly incorporated undergraduate programmes, Artificial Intelligence and Data Analytics (AIDA) and Innovation and Entrepreneurship (IE), cultivate leaders adept at navigating the Industry 4.0 era and emerging technologies.



## FOSTERING FUTURE KNOWLEDGE CREATORS VIA **URIS**

Designed to develop a new generation of enquirers and problem-solvers, our Undergraduate Research and Innovation Scheme (URIS) connects undergraduates with research projects supervised by university scholars. URIS students automatically join the virtual College of Undergraduate Researchers and Innovators (CURI) and receive priority allocation to the CURI Residential College with young academics as resident tutors.



## CULTIVATING DIVERSE STRENGTHS VIA **STARS**

PolyU admits students with exceptional talents in sports, arts and culture, leadership and community services, and STEM through our Special Talents Admission and Recognition Scheme (STARS). A vibrant learning community awaits these outstanding students in our STARS Residential College.

# ENRICHING CREATIVITY AND CHARACTER WITH ART AND CULTURE

Art and culture are essential to PolyU's holistic education, with programmes covering performing arts, visual arts, film, creative media, literature, history, and cultural heritage. We also have the PolyU Orchestra, PolyU Choir and PolyU Theatre to foster students' creativity.

Our Artist-in-Residence (AIR) programme was established in 1999 to promote cultural exchange between students and professional artists. Over the years, AIR has had around 30 renowned art virtuosos engaging with our university community, from Maestro Mr Leung Kin-fung, to Historian-in-Residence Dr Joseph S. P. Ting, Pioneer of Contemporary Ink Painting Mr Wucius Wong, King of Drama Dr Chung King-fai, and Eminent Cantonese Opera Artist Mr Yuen Siu-fai.

To further advance PolyU's artistic and cultural impact to the community, the University also launched the PolyU Artists' Alliance in April 2023, bringing together artists from different fields with Dr Liza Wang, the highly respected performing artist and a University Fellow, as the Alliance's Convenor.





# EMPOWERING ATHLETES AND UNIQUE TALENTS TO THRIVE



We believe in cultivating physical and mental strength, on and off the field. Sports have the power to build self-confidence, resilience, and a sense of camaraderie—attributes applicable to developing bold academic learners.



Through our Outstanding Sportsmen Recommendation Scheme (OSRS), which has admitted over 1,500 elite athletes, Student-Athlete Learning Support and Admission (SALSA) Scheme, and our Elite Athletes Study Programme with the Hong Kong Sports Institute, we offer high-potential student-athletes the best of both worlds: the opportunity to study while pursuing excellence in sports.



# EXPANDING STUDENTS' HORIZONS

Through exposure to varied subjects, cultures, and experiences, PolyU students gain a deeper appreciation of the Nation and the world, realising the difference that they can make in their communities and society at large.



## DEVELOPING SOCIAL VALUES AND NATIONAL IDENTITY

PolyU's curriculum promotes social responsibility, leadership integrity, law-abiding citizenship, as well as knowledge of Chinese history and culture. In January 2023, we established the Research Centre for Chinese History and Culture to further strengthen the local youth's sense of national identity and participation towards the Nation's development.

## FACILITATING KNOWLEDGE & WISDOM EXCHANGE THROUGH MENTORSHIP

PolyU's university-wide mentorship programme, "INSPIRE", offers coaching, life experience-sharing, and job shadowing led by alumni, University Fellows, Poly-preneurs, Council and Court members, and other outstanding leaders. The programme has over 270 mentors and 1,140 mentees to date, enabling students to enhance their personal, academic, and professional development.





# RESEARCH & KNOWLEDGE TRANSFER

**PolyImpact**

POLYU  
INVENTIONS  
AND  
INNOVATIONS  
THAT BENEFIT  
THE WORLD

Embedded within PolyU's DNA is a strong desire to better the world. In addition to pursuing pioneering research in frontier areas, we also embrace a strong culture of knowledge transfer. By proactively translating scientific discoveries into innovations and viable solutions, we expand human knowledge, tackle global challenges, and take the lead in making a positive impact on businesses, industries, and the world around us.

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**HK\$4,435M**  
Total Research Funding

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**3,052**  
Ongoing Research Projects

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**2,600+**  
Research Personnel

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**200+** Scholars  
Ranked Among the World's Top  
2% Most-cited Scientists  
(according to an index by Stanford University)

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Having the **largest number of top 2% scientists** in Hong Kong and globally in the fields of Civil Engineering, and Building and Construction  
(according to an index by Stanford University)

Figures from 2021/22



# BRINGING INTERDISCIPLINARY SOLUTIONS TO COMPLEX SOCIETAL CHALLENGES



PolyU Academy for  
Interdisciplinary Research  
香港理工大學高等研究院

## THE LARGEST-OF-ITS-KIND RESEARCH PLATFORM IN HONG KONG AND THE GREATER BAY AREA

Amid challenges like climate change, an ageing population, and energy shortages, the world requires game-changing research for a sustainable future. The PolyU Academy for Interdisciplinary Research (PAIR) is a unique research model for Hong Kong, fostering a collaborative platform across different disciplines to provide practical solutions for pressing societal issues.

PolyU scholars have been scientific purveyors of groundbreaking research across various fields, with a focus on three research areas:

Advanced technologies and manufacturing

Good health and well-being

Smart and sustainable cities



## 18 RESEARCH INSTITUTES & RESEARCH CENTRES UNDER PAIR

### RESEARCH INSTITUTES



Research Institute for  
Advanced Manufacturing



Research Institute for  
Artificial Intelligence of  
Things



Research Institute for  
Future Food



Research Institute for  
Intelligent Wearable  
Systems



Research Institute for  
Land and Space



Photonics Research  
Institute



Research Institute for  
Smart Ageing



Otto Poon Charitable  
Foundation Smart Cities  
Research Institute



Otto Poon Charitable  
Foundation Research  
Institute for Smart Energy



Research Institute for  
Sports Science and  
Technology



Research Institute for  
Sustainable Urban  
Development

### RESEARCH CENTRES



Research Centre for  
Chinese Medicine  
Innovation



Research Centre for Deep  
Space Explorations



Research Centre for Digital  
Transformation of Tourism



Mental Health Research  
Centre



Research Centre for  
Resources  
Engineering towards  
Carbon Neutrality



Research Centre for SHARP  
Vision



Research Centre of Textiles  
for Future Fashion



# HIGH-LEVEL SCIENTIFIC EXCHANGE AND COLLABORATION WITH THE MAINLAND

Further reinforcing PolyU's expertise in research and knowledge transfer are a number of cutting-edge University research labs and centres supported by the Nation and industry partners, fostering frontier research and innovation in different disciplines.

## 2 State Key Laboratories

- **State Key Laboratory of Chemical Biology and Drug Discovery**  
(The Hong Kong Polytechnic University)
- **State Key Laboratory of Ultra-precision Machining Technology**  
(The Hong Kong Polytechnic University)

## 2 Hong Kong Branches of Chinese National Engineering Research Centres

- **Hong Kong Branch of National Engineering Research Centre for Steel Construction**
- **Hong Kong Branch of National Rail Transit Electrification and Automation Engineering Technology Research Centre**

## 3 Chinese Academy of Sciences (CAS) - PolyU Joint Laboratories

- **Joint Laboratory for Aerosol and Environment**
- **CAS Academy of Mathematics and Systems Science (AMSS)-PolyU Joint Laboratory of Applied Mathematics**
- **CAS Guangzhou Institute of Geochemistry (GIG)-PolyU Joint Laboratory of the Guangdong-Hong Kong-Macao Greater Bay Area for the Environment**



## UNIVERSITY RESEARCH CENTRES

- Colour, Imaging, and Metaverse Research Centre
- International Centre of Urban Energy Nexus
- Peking University-The Hong Kong Polytechnic University China Social Work Research Centre
- Policy Research Centre for Innovation and Technology
- Research Centre for Artificial Intelligence in Geomatics
- Research Centre for Assistive Technology
- Research Centre for Blockchain Technology
- Research Centre for Carbon-Strategic Catalysis
- Research Centre for Chinese History and Culture
- Research Centre for Cultural and Art Technology
- Research Centre for Data Science and Artificial Intelligence
- Research Centre for Future (Caring) Mobility
- Research Centre for Gerontology and Family Studies
- Research Centre for Nanoscience and Nanotechnology
- Research Centre for Nature-Inspired Science and Engineering
- Research Centre for Quantitative Finance
- Research Centre for Unmanned Autonomous Systems

Established under the Mainland/GBA Research Funding Scheme:

- Joint Research Centre for Microelectronics
- Joint Research Centre for Marine Infrastructure
- Joint Research Centre for Biosensing and Precision Theranostics
- Joint Research Centre for Design and Net-shape Forming of Micro-/Meso-scaled Surface Functional Structures
- Joint Research Centre for Primary Health Care
- Joint Research Centre for Language, Brain, and Applications

## ADVANCING GLOBAL COLLABORATIONS WITH THREE WORLD-CLASS RESEARCH CENTRES UNDER INNOHK

To help develop Hong Kong into a hub for global research collaboration, PolyU has partnered with world-leading institutions, harnessing its research competency in artificial intelligence, design, and vision science to create three research centres under two research clusters: AIR@InnoHK (focused on artificial intelligence and robotics technologies) and Health@InnoHK (focused on healthcare-related technologies).

These three world-class research centres at the Hong Kong Science Park are:



Laboratory for Artificial Intelligence in Design (AiDLab), established in collaboration with the Royal College of Art, UK.



Centre for Advances in Reliability and Safety (CAiRS), established with the University of Maryland, College Park, USA as the key research collaborator.



Centre for Eye and Vision Research (CEVR), established in partnership with the University of Waterloo, Canada.

PolyU has also become the first local collaborating institution of the "Centre for Artificial Intelligence and Robotics, Hong Kong Institute of Science & Innovation, Chinese Academy of Sciences". Established by the Institute of Automation of the Chinese Academy of Sciences, the Centre has been admitted into AIR@InnoHK under the InnoHK Clusters.



# ADDRESSING SOCIETAL NEEDS WITH IMPACTFUL RESEARCH

PolyU has been harnessing its world-class research and knowledge transfer capabilities to make a positive impact.

## Deep Space Exploration

We have been actively involved in space projects over the past few decades, and have actively supported the Nation's space missions, including missions to the Moon and to Mars, through the development of sophisticated technological instruments and identifying possible landing regions. Our projects include developing the "Camera Pointing System" for Chang'e-3 and Chang'e-4's lunar landings, creating the "Surface Sampling and Packing System" for Chang'e-5's lunar sampling mission, and producing the "Mars Camera" for the Tianwen-1 mission.

## Smart Cities

We aim to provide an interdisciplinary platform for PolyU's experts to develop leading research in Smart Cities by capitalising on our existing interdisciplinary research strengths. Our key research themes also cover the six smart areas identified by the *Hong Kong Smart City Blueprint*, in response to the specific needs of Hong Kong as well as the generic needs for global smart cities development.

## Materials & Sensing Technology

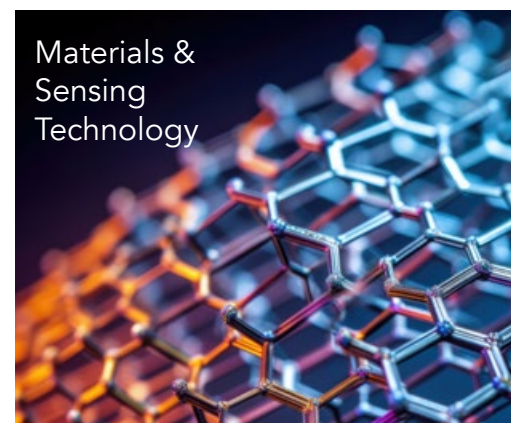
Our projects include new fabric-sensing technologies used in smart footwear and clothing to train athletes, prevent sports injuries and help people suffering from hypertension, Parkinson's disease, cardiovascular disease and diabetes. In addition, new processing technologies have been developed on the PolyU campus to produce novel electronic fabrics made from the world's finest electronic yarns.



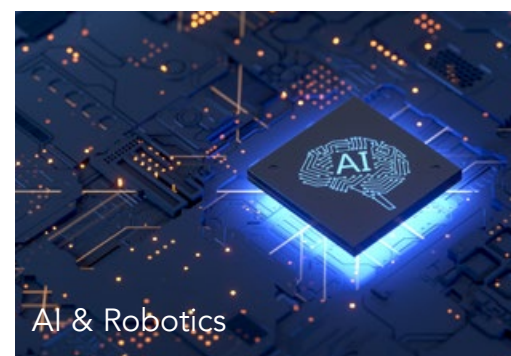
Deep Space Exploration



Smart Cities



Materials & Sensing Technology



AI & Robotics



Life Sciences & Healthcare

## Life Sciences & Healthcare

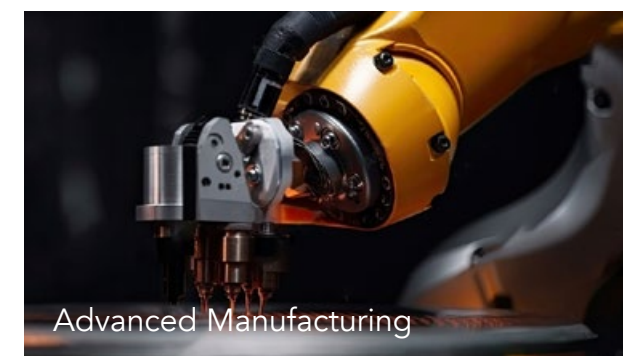
We are harnessing the power of science and innovation to transform the future of healthcare. From investigating the molecular mechanisms of cancer drug resistance to creating an AI drug discovery platform, we take pride in leveraging our unique expertise to make a positive impact on our world.

## AI & Robotics

Our facilities include the state-of-the-art Artificial Intelligence and Robotics Lab in our Industrial Centre, as well as the Research Institute for Artificial Intelligence of Things. Our research outcomes include PolyPi, an innovative autonomous robot developed for pipeline inspection.

## Advanced Manufacturing

Our vision is to create a world-class hub for global research and knowledge transfer in advanced manufacturing to drive the economic growth of Hong Kong, the Greater Bay Area and the Nation, with advanced processing and materials technologies, carbon-neutral manufacturing, digital manufacturing, and manufacturing systems and instrumentation as key research directions.



Advanced Manufacturing





# HOLISTIC ENTREPRENEURSHIP DEVELOPMENT

## PROMOTING ENTREPRENEURSHIP, DRIVING CHANGE

A pioneer in promoting innovation and entrepreneurship, PolyU is a breeding ground for aspiring entrepreneurs. Through the PolyVentures initiative, the University has developed a robust entrepreneurial ecosystem that help our academic- and student-led startups translate PolyU's research outcomes into real-world impact.

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### 480+

Total Startups

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### 370+

International and Local Awards

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### 7,600+

Entrepreneurs Trained

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### 14

Ponies

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### 4

Unicorns

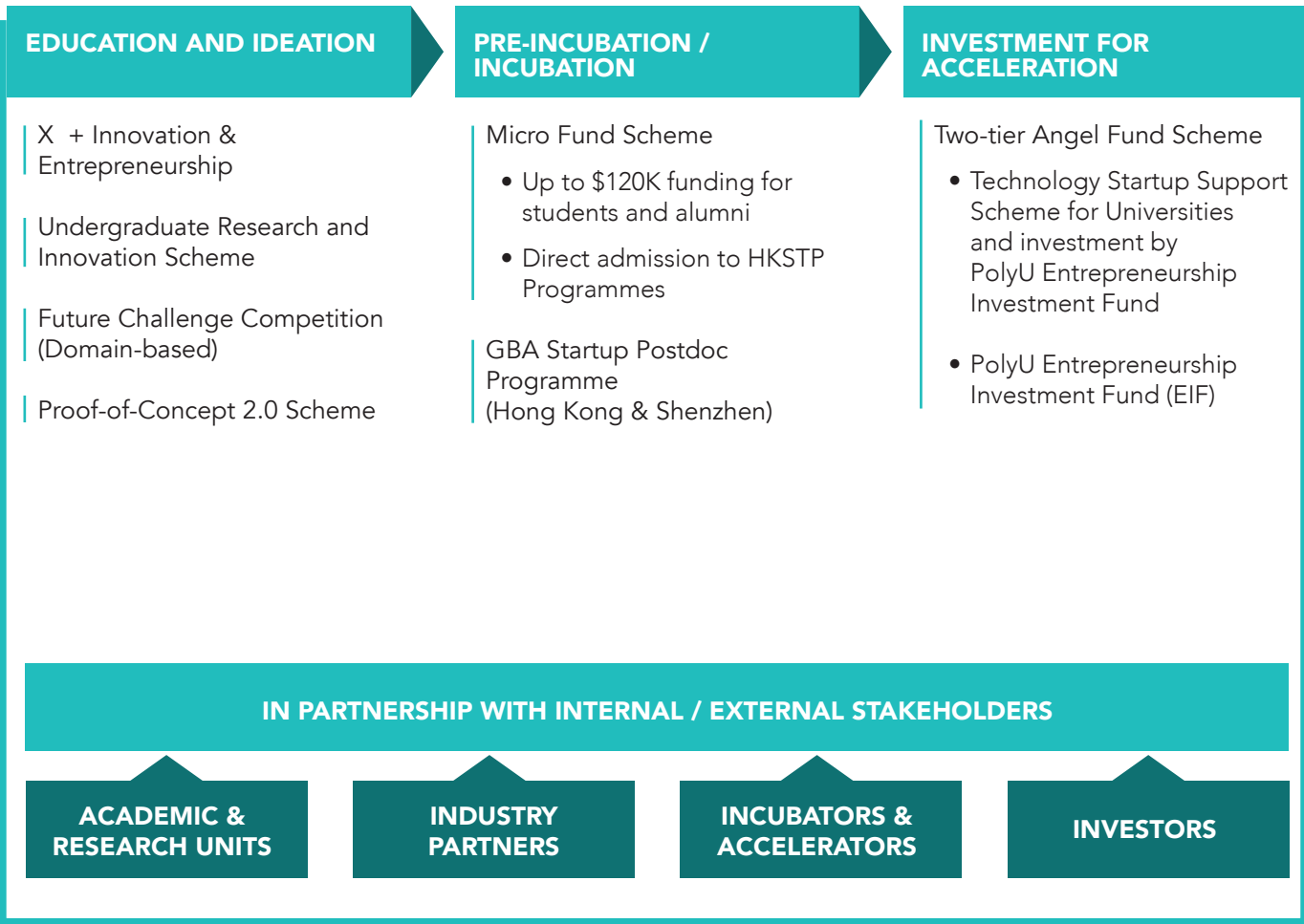
Figures as of 2022/23



Our PolyVentures ecosystem empowers aspiring PolyU-affiliated entrepreneurs to transform innovative ideas into successful businesses. Our platform, rooted in entrepreneurship and innovation, offers resources like funding, networking, incubation programmes, training, and business matching services. We foster a mindset encouraging creativity, innovation, and risk-taking, enabling entrepreneurs to overcome business challenges and bring cutting-edge technologies and innovations to the market, positively impacting society.



## ENTREPRENEURSHIP DEVELOPMENT FRAMEWORK



## EDUCATION AND IDEATION

### Future Challenge Competition

A startup ideation competition for students, researchers, alumni and industrialists to team up and come up with tech ideas and business models for the future.



## PRE-INCUBATION/ INCUBATION

### PolyVentures MICRO FUND

Max. HK\$120,000 funding  
Further incubation support up to HK\$1.29M

PolyU was the first university in Hong Kong to provide funding support to students to encourage entrepreneurship. Since its launch in 2011, the Fund has extended pre-incubation support to over 310 startups. The programme was revamped as Micro Fund 2.0 in 2021 with the support of the Hong Kong Science and Technology Parks Corporation (HKSTP), providing two-stage acceleration support for PolyU startups.

## INVESTMENT FOR ACCELERATION

### Two-Tier ANGEL FUND Scheme

Leveraging the Technology Startup Support Scheme for Universities under the Innovation and Technology Commission (ITC), the Angel Fund consists of two tiers (HK\$1M & HK\$3M) and supports technology startups comprising PolyU students, graduates, or faculty members. The Scheme supports early-stage startups which require a higher starting capital for research and development.

Funding Amount	
Tier One - HK\$1M Fund	Tier Two - HK\$3M Fund
HK\$0.5 million grant by Innovation and Technology Commission + HK\$0.5 million top-up investment by PolyU EIF (optional)	HK\$1.5 million secured private investment  + Up to HK\$1.5 million dollar-to-dollar matching grant by ITC

## Proof-of-Concept (POC) Funding Scheme

The PolyU Student Entrepreneurial Proof-of-Concept (POC) Funding Scheme, launched in 2017, is a key entrepreneurship education component at PolyU to support the ideation and prototyping of student innovations. With the support of the 'Dr Winnie S M Tang-PolyU Student Innovation & Entrepreneurship Scholarship' since 2022, the POC Fund has been upgraded to POC 2.0.

### PolyVentures GBA STARTUP Postdoc Programme @ Hong Kong | Shenzhen

#### Transforming PhD to Technopreneur

Piloted in 2019, the GBA Startup Postdoc Programme @ Hong Kong/Shenzhen aims to promote research-based entrepreneurship and nurture recent doctoral graduates to become "Technopreneurs". The first of its kind in Asia, the programme offers dual academic supervision and industry mentorship for doctoral graduates who have strong passion and vision to commercialise research outcomes in the Greater Bay Area through acceleration support for PolyU startups.

## PolyU ENTREPRENEURSHIP INVESTMENT FUND

The Entrepreneurship Investment Fund is an early-stage equity investment fund that leverages the resources and expertise of our co-investors and partners to further drive our research-into-impact mission. The Fund supports the scaling-up of startup companies which commercialise PolyU's research and innovations.



# POLYU ACADEMIC-LED STARTUPS

VISION SCIENCE AND TECHNOLOGY COMPANY LIMITED (VST)

## Soft contact lens to slow myopia progression

**Prof. To Chi-ho, Prof. Carly Lam and Dr Dennis Tse** of the School of Optometry have developed the novel myopia defocus technology to slow myopia progression. Additionally, Prof. To established VST to commercialise the technology and launched the DISC contact lens to market. The lens was proven to retard myopia progression among children aged between 8 and 13 by 60% on average. Later, VST partnered with **Prof. Benny Cheung**, Chair Professor of Ultra-precision Machining and Metrology, to develop the Novel Nano Multi-ring Defocus Incorporated Spectacle (NMDIS) lens which can be applied to spectacle lenses for providing added comfort while offering more stable vision for wearers.



TELEFIELD MEDICAL IMAGING LIMITED

## Radiation-free 3D scanning helps scoliosis patients monitor their condition

**Ir Prof. Zheng Yongping**, Founding Head of the Department of Biomedical Engineering, developed Scolioscan, the world's first 3D ultrasound scoliosis assessment system, so that patients, especially adolescents, can be screened for scoliosis without the radiation hazards associated with X-ray imaging.

The system can even be used to predict the future progression of scoliosis and evaluate the effects of treatments in real time during exercise or brace fitting. It has been used in different parts of the world, including Australia, Mainland China, Germany and the Netherlands.



GRAND RISE TECHNOLOGY LIMITED

## Non-toxic, eco-friendly antimicrobial coating reduces risk of disease from surface transmission

**Prof. Li Pei** of PolyU's Department of Applied Biology and Chemical Technology, and **Dr Tenny Lam**, a PolyU Doctor of Business Administration graduate, co-established Grand Rise, translating the patented core-shell nanoparticle technology invented by Professor Li to eco-friendly new materials. Their first product, CareCoatex™, a biocompatible, non-toxic and eco-friendly antimicrobial coating, can kill 99% of common bacteria and viruses.



IMMUNE MATERIALS LIMITED

## Antimicrobial 3D printing materials for infection control in public and medical markets

**Dr Chris Lo Kawn-yu**, Professor, and **Prof. Kan Chi-wai**, Associate Dean (Strategic Planning & Development), School of Fashion and Textiles, developed the world's first antiviral 3D printing material technology, which can be used to create antibacterial products that can eliminate 70% of the pathogens on surfaces within two minutes and 99.2% within 20 minutes. It is highly effective in preventing the spread of pathogens, e.g., E. coli and human coronavirus.



# DEVELOPING INVENTIONS FOR IMPACT





# ALUMNI



## FORGING A BETTER WORLD WITH EXCEPTIONAL ALUMNI

For over eight decades, PolyU has nurtured more than 477,000 graduates worldwide. These graduates have flourished as distinguished leaders, high achievers, and role models in various fields including the public sector, healthcare, accounting, engineering, the arts, entrepreneurship, community leadership, and many more.

PolyU alumni are ambassadors of meaningful change. Imbued with a strong desire to apply their knowledge in serving society, they have helped address the needs of Hong Kong, the Nation and the world through their respective careers. These thriving professionals have also continued to support PolyU's next generation of leaders by participating in various alumni initiatives.

## FOSTERING CONNECTIONS WITH EXTENSIVE ALUMNI NETWORKS

PolyU maintains an extensive network of engaged and supportive alumni in Hong Kong and around the world. From 40 local alumni associations, to further alumni networks in Mainland China and overseas associations across Australia, Canada, Singapore, the UK and the United States, our alumni networks keep PolyU graduates connected with the university community long after they have left the campus. These networks also enable established graduates to reach out to existing students, and vice-versa, enabling fruitful knowledge, career, and opportunity exchanges between the two.

## SUPPORTING POLYU'S CONTINUED GROWTH

Always seeking to grow and inspire growth, many of our alumni regularly participate in programmes that support their alma mater and the PolyU community. They lend their expertise, time, and networks towards mentoring students, leading alumni groups, participating in fundraising events, and more, contributing to PolyU's continued pursuit of academic and research excellence in whichever way they can.

# 477K+

Graduates around the World

# 40

Local Associations

# 8

Overseas Associations

# 10

Mainland Networks

# 100

Outstanding PolyU Alumni Awardees

Figures as of 2022/23



# ENGAGING THE NATION AND INTERNATIONAL OUTREACH

## BUILDING STRONG CONNECTIONS WORLDWIDE

PolyU has built robust partnerships with tertiary and research institutions worldwide, and with a firm presence in Mainland China, we are also committed to supporting the development of the Guangdong-Hong Kong-Macao Greater Bay Area. We are actively strengthening our international networks, and advancing our education, research, and knowledge transfer impact around the globe.

## GLOBAL ENGAGEMENT

# 9,800+

Annual Number of Non-local Students  
as of 31 October 2022

# 275+

Overseas Partner Institutions from  
42 Countries and Regions  
as of 30 June 2023

## MAINLAND NETWORK

Joint PhD Programmes with

# 14

Mainland Universities

# 2,300+

Mainland Collaboration Projects

# 700+

Mainland Partner Universities /  
Research Institutes

Figures as of 2021/22



# ADVANCING THE NATION'S DEVELOPMENT WITH EDUCATION & RESEARCH

PolyU has actively built ties with the Mainland to advance its research capabilities and develop talent who are capable of moving the Nation towards progressive economic growth.

## NATION-APPROVED RESEARCH FACILITIES

PolyU is home to two State Key Laboratories and two Hong Kong Branches of the Chinese National Engineering Research Centres: State Key Laboratory of Chemical Biology and Drug Discovery, State Key Laboratory of Ultra-Precision Machining Technology, National Engineering Research Centre for Steel Construction (Hong Kong Branch), and the National Rail Transit Electrification and Automation Engineering Technology Research Centre (Hong Kong Branch). Approved by the Ministry of Science and Technology, these facilities are dedicated to advancing the technological and scientific development of the Nation and the GBA through research covering life sciences, infrastructure development, advanced optics and critical precision components, rail technical innovations, drug discovery, advanced manufacturing, applied engineering for steel construction, and more.

## DRIVING INNOVATION WITH SPACE AND INFRASTRUCTURE PROJECTS

PolyU has contributed to a number of key deep space exploration, mega-structure and high-speed railway research projects for the Nation over the years.

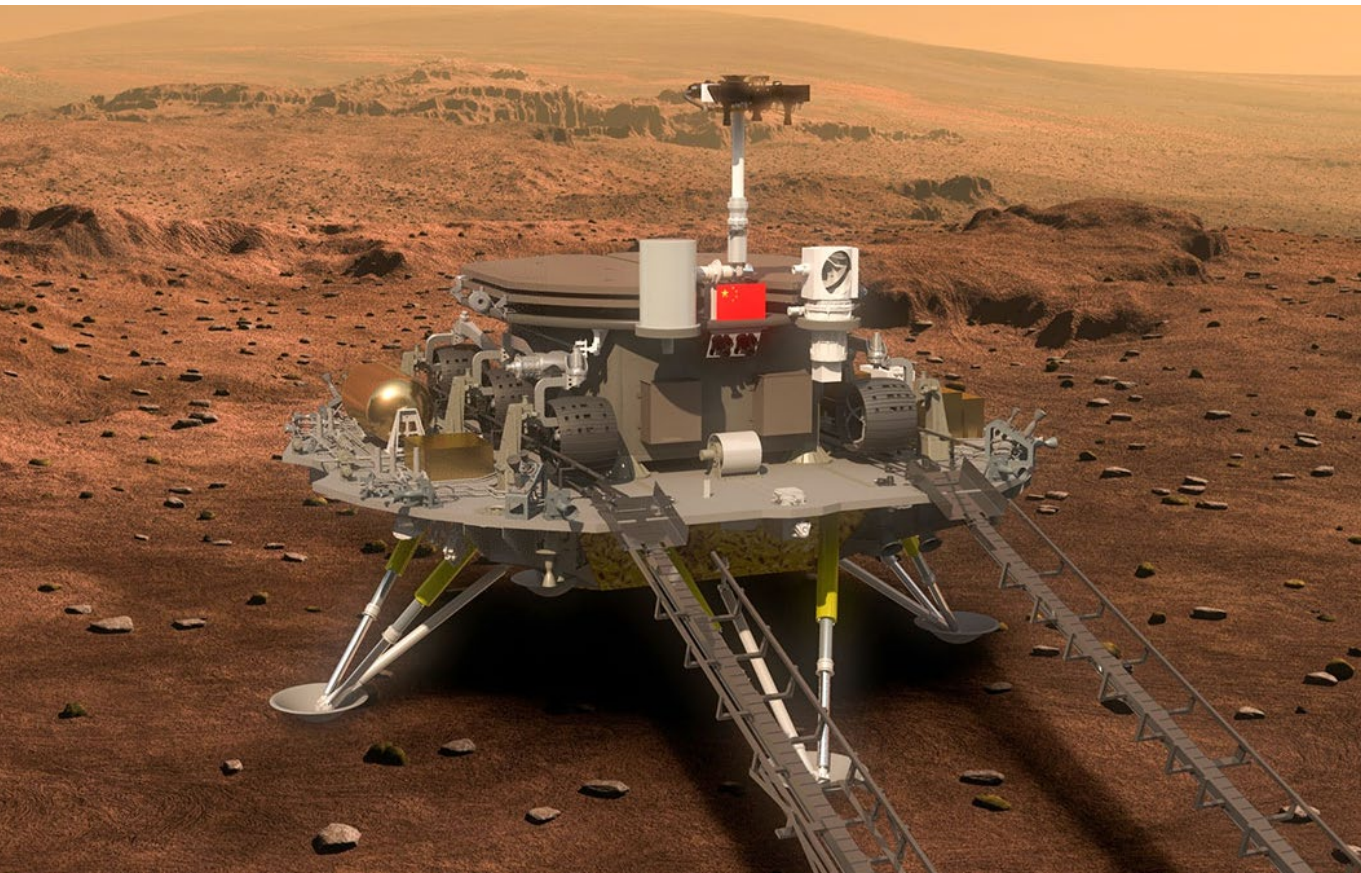
We are the only local university to have been involved in national space missions, making significant contributions to the Nation's historic space missions including the Chang'e-3 mission in 2013, Chang'e-4 mission in 2019, Chang'e-5 mission in 2020 and Tianwen-1 mission in 2021. To enable predictive maintenance and improve the service reliability of our metro lines, we've also developed a smart railway condition monitoring technology whose proprietary optical fibre sensing technology has now been installed in several parts of the Nation's high-speed rail network as well as adopted in multiple countries. Moreover, our Structural Health Monitoring System provides health checks throughout a building's lifespan, and has been installed in major architecture such as the Sutong Bridge and Canton Tower in the Mainland.



## NURTURING FUTURE LEADERS WITH JOINT PROGRAMMES

PolyU has been offering joint programmes ranging from master's to doctoral levels in collaboration with Mainland universities. PolyU also has the highest number of educational programmes approved by the Ministry of Education among Hong Kong institutions.

POLYU'S COOPERATIVE EDUCATION PROGRAMMES APPROVED BY THE MINISTRY OF EDUCATION
<b>Doctor of Hotel and Tourism Management</b> (in collaboration with Zhejiang University)
<b>Doctor of Management</b> (in collaboration with Renmin University of China)
<b>Master of Arts in Fashion and Textiles (Fashion Merchandising)</b> (in collaboration with Xi'an Polytechnic University)
<b>Master of Business Administration</b> (in collaboration with Xi'an Jiaotong University)
<b>Master of Science in Disaster Nursing</b> (in collaboration with Sichuan University)
<b>Master of Science in Hotel and Tourism Management</b> (in collaboration with Zhejiang University)
<b>Master of Science in Information Systems</b> (in collaboration with Xi'an Jiaotong University)
<b>Master of Science in International Real Estate</b> (in collaboration with Zhejiang University)
<b>Master of Science in Quality Management</b> (in collaboration with Zhejiang University)





ADDRESSING SOCIETAL NEEDS  
WITH TRANSLATIONAL RESEARCH

To transform our research into targeted solutions for the Mainland, PolyU is setting up translational research institutes in various Mainland cities. These institutes aim to align the University’s research capabilities with the industrial and societal needs of the Mainland cities, thereby promoting their development. Funding for each institute is secured from the host cities for the institute’s applied research and knowledge transfer activities.

The University has already signed an MoU and detailed agreement with Jinjiang to set up a translational research institute. We have also signed MoUs with Wuxi, Wenzhou, Hangzhou, Shenzhen (Guangming), and the Eastern Institute of Technology in Ningbo, among others, to establish translational research institutes.

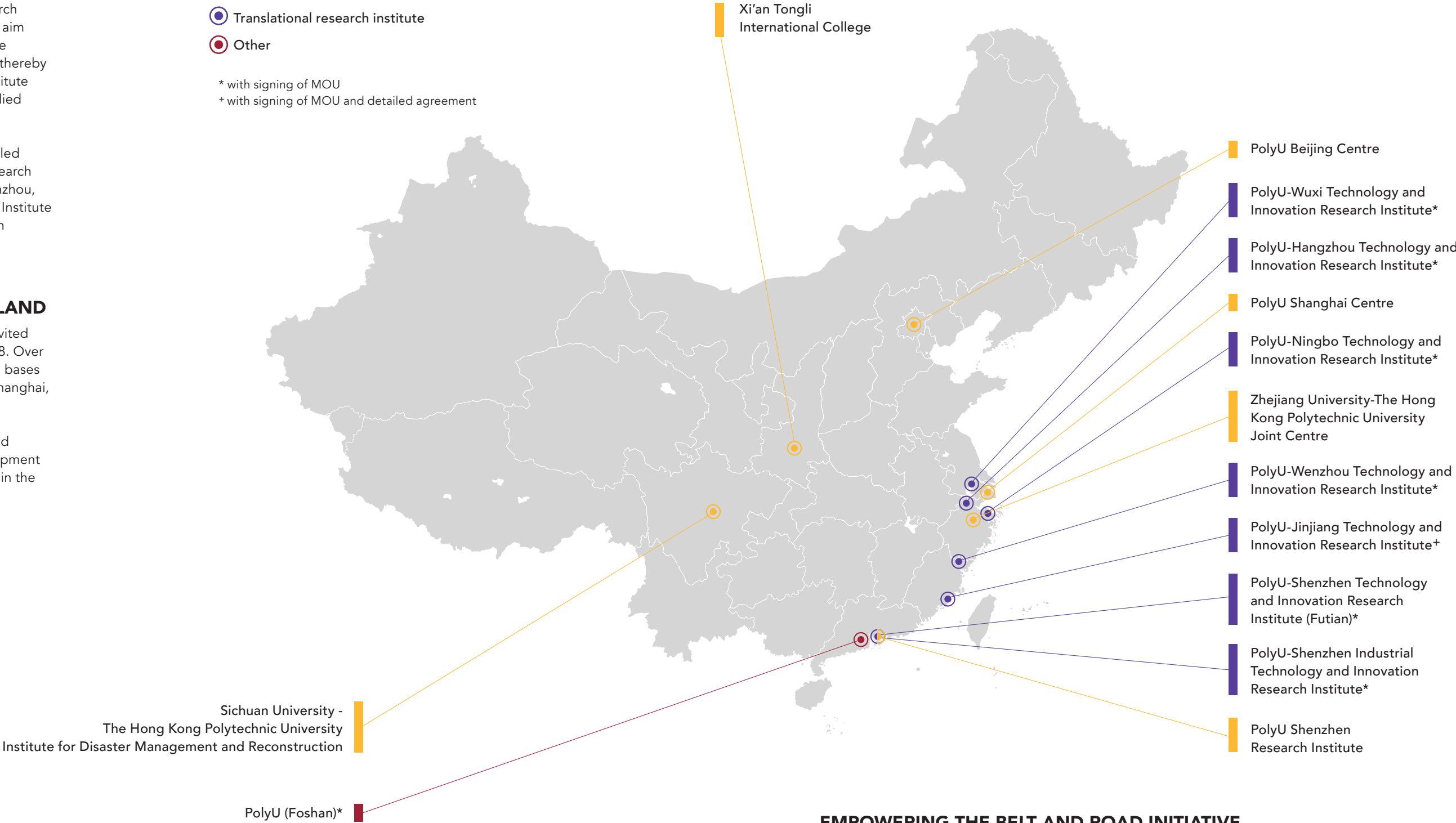
SIX REGIONAL BASES IN THE MAINLAND

PolyU was the first institution in Hong Kong to be invited to visit leading institutions in the Nation back in 1978. Over the years, the University has established six regional bases in the Mainland – in Beijing, Chengdu, Hangzhou, Shanghai, Shenzhen and Xi’an.

Building on the strengths of these regional bases and partnerships, the University will capitalise on development opportunities in the Mainland, taking a greater part in the development of the Nation.

POLYU’S MAINLAND PRESENCE

- Regional base
  - Translational research institute
  - Other
- \* with signing of MOU  
+ with signing of MOU and detailed agreement



EMPOWERING THE BELT AND ROAD INITIATIVE

Leveraging our expertise and capacity-building network, we foster talent development, research and knowledge transfer among Belt and Road countries.

PolyU is a founding member of the University Alliance of the Silk Road to promote cultural exchange and collaboration with more than 150 leading universities from 37 countries and regions. We also developed the Belt and Road Cross-Professional Advancement Programme to provide an interdisciplinary knowledge platform for professionals and business leaders in Hong Kong and the Mainland, as well as the Belt and Road Advanced Professional Development Programme in Power and Energy, the first of its kind in Mainland China and Hong Kong, to address the growing demand for talent in the power and energy sector. Furthermore, our bilateral research exchange schemes include the Belt and Road Academic Fellowship Scheme, the K.C. Wong Belt and Road Visiting Fellowship Scheme, and the Research Student Attachment Programme.



# OUR WORLDWIDE REACH

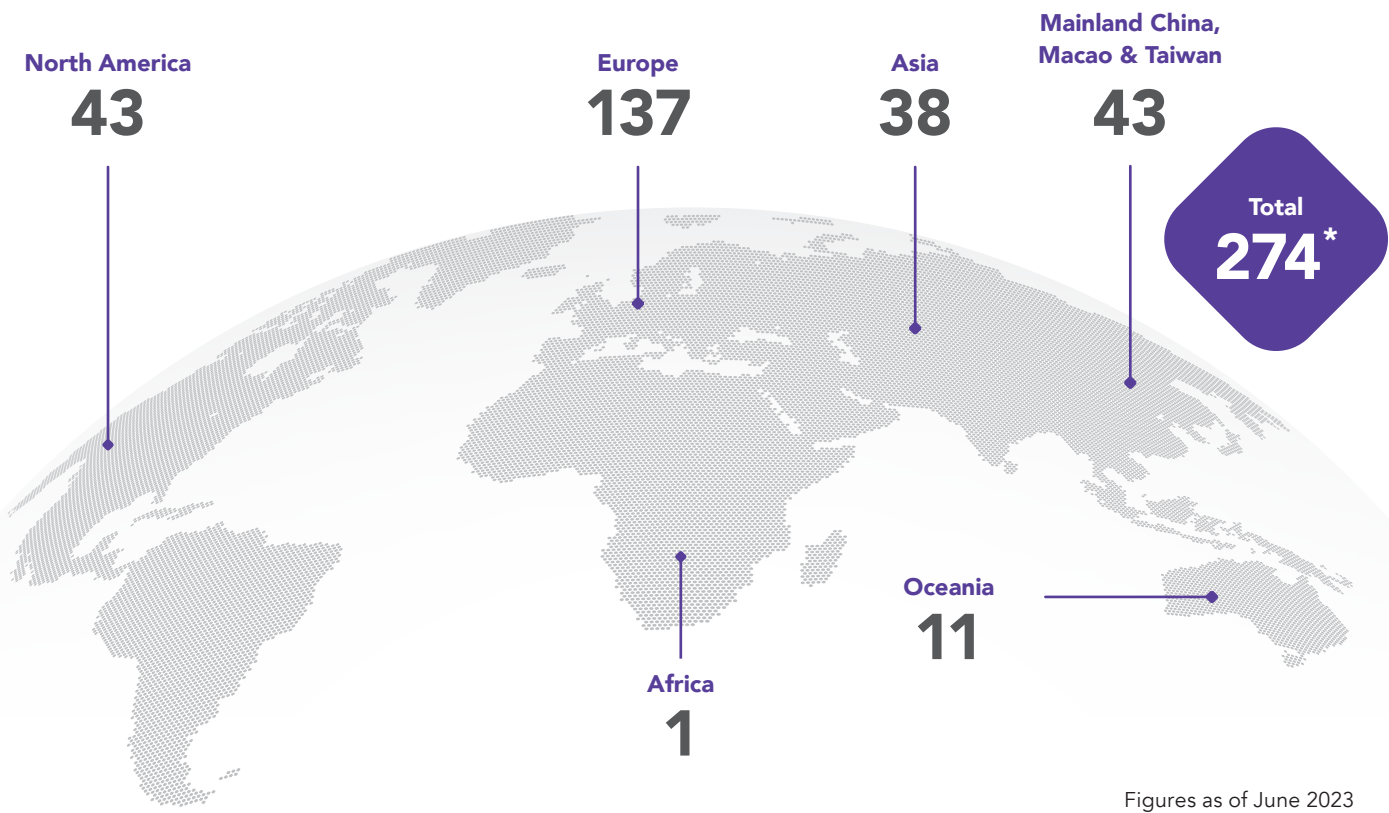
As an international and world-class university with a multicultural learning, teaching and research environment, PolyU maintains relationships with over 275 overseas partner institutions in 42 countries and regions across the globe. We have over 440 academic collaboration agreements in place worldwide, encompassing student exchange initiatives as well as research collaborations. The University will continue to broaden the scope of its collaboration with existing partners and establish new partnerships with highly ranked institutions worldwide, solidifying PolyU’s position as a leading force in global academia.



## GLOBAL CONNECTIONS



## STUDENT EXCHANGE PARTNERS



\* One of the student exchange partnerships is a worldwide arrangement with “Global Engineering Education Exchange (GE3)” which does not fall into a single region.

## CHAMPIONING AN INTERNATIONAL LEARNING ENVIRONMENT

PolyU is committed to building a truly international and inclusive campus. Ranked 6th in the “World’s Most International Universities 2023” by Times Higher Education, we have forged partnerships with leading institutions worldwide to facilitate international academic exchanges, as well as promote cultural diversity and an appreciation of global issues, among our students. By 2027/28, we also aim to provide every undergraduate student access to a non-local study opportunity.

## DEVELOPING OUTSTANDING PHD GRADUATES WITH GLOBAL PARTNERS

Through our Joint PhD Programmes, students can benefit from the research excellence of overseas partner universities and obtain their PhD degrees from both PolyU and any of these prestigious institutions: Queensland University of Technology (Australia), University of Technology Sydney (Australia), and University of Surrey (UK).



## UNIVERSITY SOCIAL RESPONSIBILITY NETWORK (USRN)

Established in 2015, the USRN is a global alliance promoting University Social Responsibility by exchanging ideas, resources, and practices to guide USR development in higher education. With 20 member institutions worldwide, including PolyU as a founding member and Executive Committee Chair, members are leading universities dedicated to making a positive societal impact.





# CAMPUS SUSTAINABLE

## EXPANDING THE CAMPUS AND ACHIEVING CARBON NEUTRALITY

PolyU is dedicated to building a green learning environment. We have been undertaking campus development initiatives to advance our leadership in education and research as well as support a carbon-neutral Hong Kong. Leveraging our own innovations, these projects aim to facilitate the adoption of sustainable applications beyond the campus for the betterment of Hong Kong, the Nation, and the world.

QS WORLD UNIVERSITY RANKINGS: SUSTAINABILITY 2023

Hong Kong **2<sup>nd</sup>** Global **82<sup>nd</sup>**

WASTE AND CARBON REDUCTION

**246,700+** nos.

Recycling Volume at Reverse Vending Machine (RVM) **↑146%** compared to 2021/22

**1.46** tonnes CO<sub>2</sub>e

Direct and Indirect Carbon Emissions per Capita (Scope 1 and 2 emissions only) **↓>30%** compared to the peak level in 2014/15

The figure is subject to the 2023 emission factors of the utility companies which are to be published in 2024.

**230+** tonnes

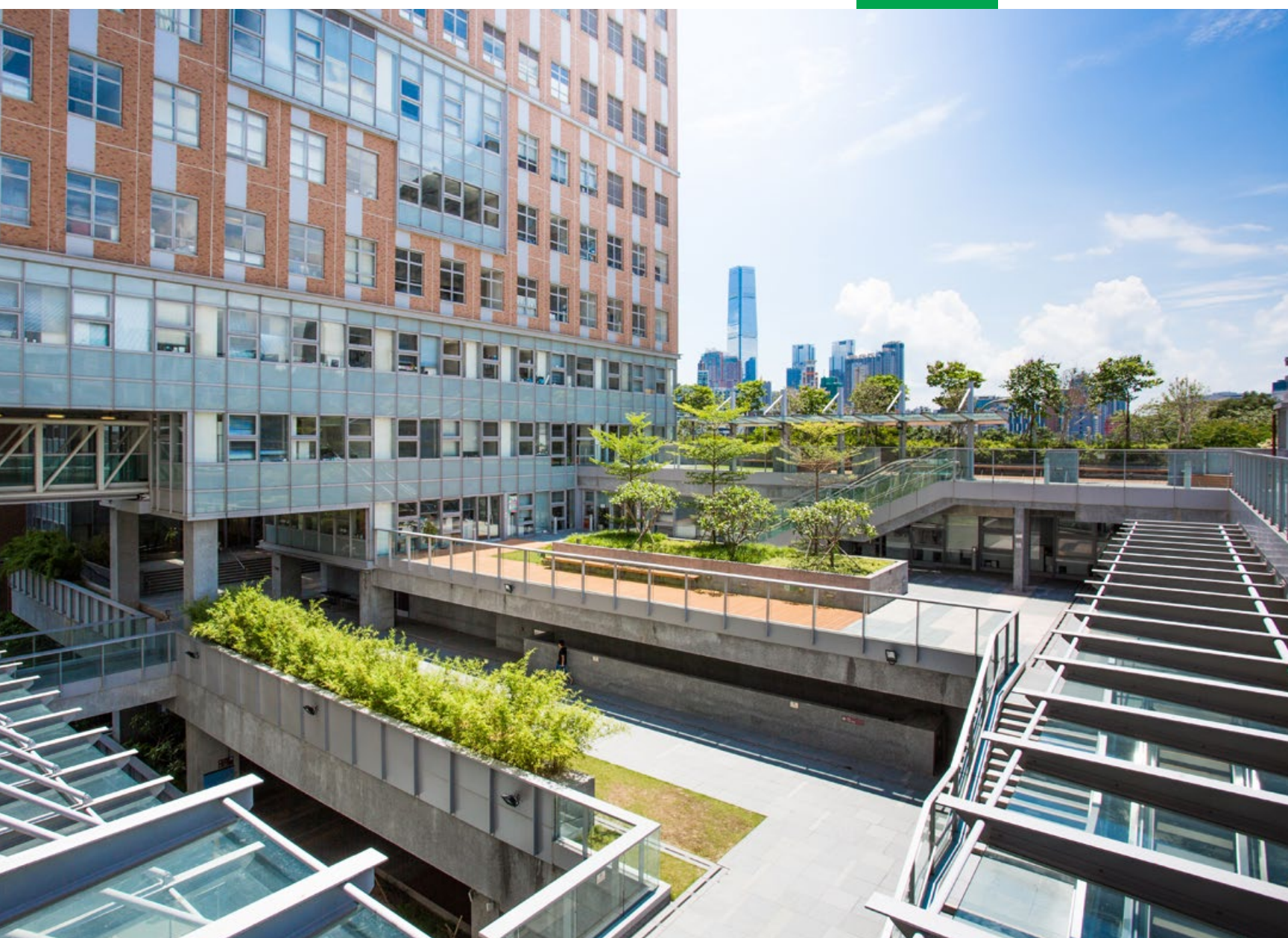
Reduction of Municipal Solid Waste Disposal to Landfill from Main Campus

Figures from 2022/23



# AN INTERDISCIPLINARY APPROACH TO DECARBONISING HONG KONG

In support of the Hong Kong Government's carbon neutrality plan, PolyU has established the Campus Carbon Neutrality Committee to oversee the University's progress against its 2045 carbon neutrality roadmap. The Carbon Neutrality Funding Scheme has also been created to support the application of related research on campus and aid various PolyU experts as they work on groundbreaking decarbonisation research initiatives for the University and the wider community.



# IN-CAMPUS COLLABORATIONS FOR A GREENER FUTURE

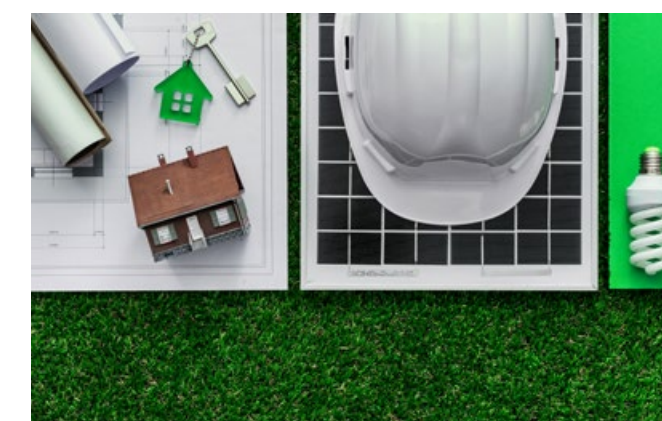
PolyU's laboratories are built to develop technologies for driving carbon neutrality, smart energy management, building sustainability, and community health. By incorporating these homegrown innovations into our present and future spaces, PolyU becomes a proof-of-concept platform, from which impactful, market-ready solutions can flourish to realise a more sustainable society.

## ADVANCING REAL-WORLD APPLICATIONS WITH SUSTAINABILITY-RELATED RESEARCH PROJECTS

Nurturing original thinkers with a heart for the environment, PolyU is shaping the future of sustainability research with revolutionary inventions initiated and applied within and around the campus:



A building-integrated photovoltaics system for promoting clean, eco-friendly and renewable energy



An energy-saving system that can conduct an overall building analysis for reducing energy consumption while sustaining normal air-conditioning and lighting



Eco-friendly construction materials, or "eco-blocks", that can reduce glass waste and curb carbon emissions



# FORGING AHEAD AS AN INNOVATIVE WORLD-CLASS UNIVERSITY

At PolyU, our vision for the future is to be an innovative world-class university with a strong sense of social responsibility. As emerging technologies continue to reshape our world, we will continue to innovate our educational initiatives and pedagogies to nurture talented and caring graduates who can meet evolving societal needs and play a leading role in the innovation and technology industries transforming Hong Kong, the Greater Bay Area, and beyond.

Research with practical impact will remain central to our mission. We will persist in conducting research that transcends academia, focusing on promoting sustainable development and addressing the world's most pressing issues. Our strong interdisciplinary research culture, international engagement and established expertise in STEM will enable us to drive the production of impactful solutions that make a positive difference.

Last but not least, we will strive to be one of the best universities in the country in engineering, technology, and related subjects, and a global leader in our many unique disciplines. We will also aspire to be a world leader in fulfilling university social responsibility. In all the above ways, we will ensure that we stay at the forefront of propelling the development of Hong Kong, the Nation, and the world.









[www.polyu.edu.hk](http://www.polyu.edu.hk)

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