



THE HONG KONG  
POLYTECHNIC UNIVERSITY  
香港理工大學



Department of Computing  
電子計算學系



MASTER OF SCIENCE IN

# CYBER SECURITY

EMPOWERING THOUGHTFUL LEADERS IN  
CYBER DEFENCE AND DIGITAL RESILIENCE



# About US

## About PolyU

With over 87 years of proud tradition and ranking among the world's top 100 institutions, PolyU strives in interdisciplinary research and impactful innovations to address real-world challenges.

## About COMP

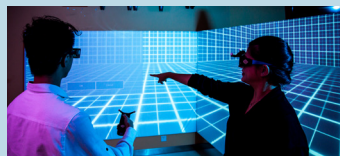
The Department of Computing (COMP) is one of the pioneers offering computing education in the territory. Since 1974, COMP has been devoted to nurturing professional talents to support the advancement of society.

## Advanced learning facilities & laboratories

COMP owns world-class laboratories and the first University Research Facility in Big Data Analytics in Hong Kong, providing solid hardware support for cross-disciplinary research and teaching activities.

- Collaborative Generative AI (Co-GenAI) Research Centre
- FinTech and Cyber Security Lab (FCSL)
- Internet and Mobile Computing Lab (IMCL)
- Research Centre on Data Science and Artificial Intelligence (RC-DSAI)
- The Research Centre for Blockchain Technology (RCBT)
- University Research Facility in Big Data Analytics (UBDA)

Students undertaking projects and dissertations will have the opportunity to access other resources such as the Virtual Reality and Game Lab and the Big Data and Cloud Computing Platform.



Game Lab



Research Centre on Data Science and Artificial Intelligence (RC-DSAI)

## International Recognition

Today, COMP has gained international recognition for its world-class research and high-quality education and is ranked among the top 100 in a number of world rankings. In the latest world university rankings by the subject "Computer Science":

25<sup>th</sup>

U.S. News & World Report 2025

40<sup>th</sup>

Global Ranking of Academic Subject 2024

74<sup>th</sup>

The Times Higher Education World University Rankings 2025

## Excellent platform for peer learning & exchange

Our MSc programmes offer a well-resourced environment of broad student mix, students can benefit from interaction with their peers in exchanging ideas and sharing experiences. COMP also maintains an extensive network of MSc alumni, students can acquire both advanced expertise and professional networks that help them scale new heights in their careers.

## MSc in Cybersecurity

# Programme Introduction

The Master of Science in Cybersecurity (MScCYS) programme aims to empower students with the comprehensive knowledge and practical skills needed to address the evolving challenges in the field. By combining technical expertise with strategic management insight, the programme prepares graduates to safeguard critical information assets, uphold integrity, accountability, and trust, and strengthen organisational resilience against emerging cyber threats, while staying abreast of advanced cybersecurity technologies and embracing lifelong learning.

## First Comprehensive MSc in Cybersecurity Programme in Hong Kong

Designed specifically for the Asia-Pacific region's unique cybersecurity challenges and regulatory environment. Our programme addresses the distinctive cybersecurity landscape of the Asia-Pacific region, incorporating regional and global threat intelligence, regulatory frameworks, and policy development in security implementation.

## Keep Abreast of State-of-the-Art Cybersecurity Research

Features an advanced cyber range platform for immersive threat simulation exercises. Students engage with the latest research in artificial intelligence for threat detection, quantum-resistant cryptography, blockchain security, and IoT protection. Through research seminars, industry white paper analysis, and collaboration with PolyU's Research Centre for Blockchain Technology, students remain at the forefront of emerging cybersecurity technologies and methodologies.

## Extensive Industrial Network and Real-World Integration

Leverages Hong Kong's development as a global cybersecurity hub and dynamic tech hub. Our programme provides industry-integrated opportunities for meeting and learning from experienced practitioners in the industry, featuring real-world case studies and addressing actual organizational security challenges.

## Distinguished Career and Continuing Education Pathways

The programme prepares graduates for potential career advancement opportunities in roles such as Security Architect, Incident Response Manager, Cybersecurity Consultant, and Chief Information Security Officer. It also provides a strong foundation for further studies in cybersecurity research, inspiring graduates to contribute as innovators and thought leaders in addressing the ever-evolving challenges of the digital landscape.

University Research Facility in Big Data Analytics (UBDA)



# Programme Structure

## MSc in Cybersecurity

Students must complete a total of 31 credits, typically over 1 year (full-time) or 2 years (part-time). All subjects carry 3 credits, except for the Dissertation (9 credits) and Project (6 credits). Full-time students generally enroll in five subjects per semester, while part-time students take two to three subjects.

Awards	MScCYS
With Dissertation	4 Core + 3 Disciplinary-specific Electives + 1 Dissertation + 1 AIE Subject
With Project	4 Core + 3 Disciplinary-specific Electives + 1 Elective + 1 Project + 1 AIE Subject
Without Dissertation / Project	4 Core + 3 Disciplinary-specific Electives + 3 Electives + 1 AIE Subject
Credits requirements	31

### MODE OF STUDY

This is a mixed-mode programme that students may pursue their studies either in full-time or part-time mode.

### AWARD REQUIREMENT

Students are required to complete 31 credits for the MSc in CYS.

# Subject Introduction

## Subjects

### Core Subjects

- Modern Cryptography
- AI Security
- Cybersecurity Risk Management
- Privacy Technologies and Management

### Academic Integrity and Ethics Subject

- EEE5T03 Engineering Ethics & Academic Integrity (1 credit)

### Disciplinary-specific Electives

- Cyber and Internet Security
- IoT Security: Principles, Protocols, and Practice
- Mobile and Wireless Security
- Digital Forensics
- Cybersecurity Testing and Intrusion Prevention

### Elective Subjects

- Data Structures and Database Systems
- AIBD Programming
- Metaverse Fundamentals
- Software Engineering and Development
- Internet Infrastructure and Protocols
- Wireless Networking and Mobile Computing
- Distributed Ledger Technology, Cryptocurrency and E-Payment
- Computer Vision and Image Processing
- Advanced Artificial Intelligence
- Applied Cryptography for Financial Applications
- Decentralized Apps Fundamentals and Development
- Blockchain and Smart Contract Security
- Fintech Regulation and Compliance
- Statistical Data Mining
- Artificial Intelligence and Big Data Computing in Practice
- Introduction to Quantum Computing
- Spoken Language Processing
- Pattern Recognition: Theory & Applications
- Video Technology
- Computational Intelligence and its Applications
- Speech Processing and Recognition
- Security in Data Communication
- IoT - Tools and Applications
- Sensor Networks
- Mobile Edge Computing

This programme offers a comprehensive curriculum covering cryptographic technologies, AI and IoT security, risk management, and digital forensics, complemented by electives in intrusion prevention, and wireless and mobile security, with an emphasis on ethics, compliance and professional integrity.

Students are allowed to choose from a common pool of electives, subject to vacancies available. Subjects such as Dissertation and Project have different assessment requirements and require supervision arrangements.

All subjects below bear three credits unless otherwise stated, and they are subject to review and changes.



# Admission Requirements

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 provide one of the following proficiency test results (taken in a single sitting within 2 years) for fulfil the minimum English language requirement for admission purpose:

- A score of 80 or above in the Test of English as a Foreign Language (TOEFL) Internet-based test; OR
- An Overall Band score of 6.0 or above in the International English Language Testing System (IELTS) Academic module.

More information can be found at [www.polyu.edu.hk/study](http://www.polyu.edu.hk/study).

## Application

To apply for the programme, applicants can submit their application via an online admission system at [www.polyu.edu.hk/admission](http://www.polyu.edu.hk/admission). This programme has a quota for admission; therefore, early application is strongly encouraged.

Programme Code	61039
Tuition Fee	HK\$14,200 per credit for local and non-local students

Department  
of Computing



PolyU COMP

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