MASTER OF SCIENCE IN COMMERCE AND INFORMATION TECHNOLOGY

Department of Computer Science

PROGRAMME CODE: P53

Early application is strongly encouraged. Applications normally start in mid-November and are processed on a rolling basis. Review of applications will start before the deadline and finish as soon as all places are filled.

For application deadline, tuition fees and other information, refer to the following Website.

http://www.cityu.edu.hk/pg/programme/P53
The Master of Science in Computer Science (MSCS) programme aims to (1) enable computer professionals to strengthen and upgrade their technical capabilities in computer software development, (2) broaden students’ knowledge and deepen their understanding of key issues of specific areas in computer science, including artificial intelligence, data science, information security, multimedia, and other related contemporary technologies, and (3) prepare graduates to take up research and advanced innovative development work in the industry or pursue higher research studies.

Each course is worth 3 credit units except Project which is worth 6 credit units.

<table>
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<tr>
<th>Core Courses (9 credit units)</th>
<th>Elective Courses (21 credit units)</th>
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<tr>
<td>• Computer Networks and Internets</td>
<td>Group I (at least 3 credit units)</td>
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<tr>
<td>• Data Engineering</td>
<td>• Algorithms &amp; Techniques for Web Searching</td>
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| • Software Engineering | Computer Games Design
|                              | Guided Study
|                              | Machine Learning |
|                              | Machine Learning: Algorithms and Applications*
|                              | Natural Language Processing*
|                              | Privacy-enhancing Technologies
|                              | Project (6 credit units)
|                              | Topics in Machine Learning
|                              | Topics on Information Security
|                              | Vision and Language
|                              | Virtual Reality Technologies and Applications

Group I (at least 3 credit units) Choose all two courses

- Big Data Algorithms and Techniques
- Data Warehousing and Data Mining
- Stream Elective (choose at least one)

Group II

- Artificial Intelligence
- Big Data Algorithms and Techniques
- Cloud Computing: Theory and Practice
- Computer Graphics
- Cryptography: Theory and Practice
- Data Warehousing and Data Mining
- Information Security for eCommerce
- Information Security Technology Management
- Intelligent Systems
- Introduction to eCommerce
- Multimedia Technologies and Applications
- Practical Optimization Algorithms and Techniques
- Software Quality Engineering
- Virtual Reality and Game-Engine Technologies
- Vision and Image

Note: Courses offered in each semester are subject to actual student enrolment, staff availability and other considerations.

Students may freely choose elective courses without concentration, or choose elective courses to concentrate on a study stream:

- **DATA SCIENCE STREAM**
  - Stream Core (choose all two courses)
  - *Big Data Algorithms and Techniques*
  - *Data Warehousing and Data Mining*
  - Stream Elective (choose at least one)

- **INFORMATION SECURITY STREAM**
  - Stream Core (choose all two courses)
  - *Information Security for eCommerce*
  - *Information Security Technology Management*
  - Stream Elective (choose at least one)

- **GROUP I**
  - *Algorithms & Techniques for Web Searching*
  - *Cryptography: Theory and Practice*
  - *Guided Study†*
  - *Privacy-enhancing Technologies*
  - *Machine Learning*
  - *Topics on Information Security*

- **GROUP II**
  - *Topics in Machine Learning*
  - *Topics on Information Security*
  - *Vision and Language*
  - *Virtual Reality Technologies and Applications*

† Guided Study is both a Data Science Stream Elective and an Information Security Stream Elective

**POSTGRADUATE DIPLOMA IN COMPUTER SCIENCE**

The Postgraduate Diploma in Computer Science is an intermediate award which a student may obtain after the completion of 24 credit units (including all core courses and at least 3 credit units of elective courses in Group I) with satisfactory results if the student decides not to continue with the MSCS Programme.

**ENTRANCE REQUIREMENTS**

**UNIVERSITY ENTRANCE REQUIREMENTS**

Applicants for admission to the University’s Postgraduate Certificate, Postgraduate Diploma or Taught Master’s Degree programmes must:

- hold a bachelor’s degree from one of the universities in Hong Kong or from an overseas institution recognised for this purpose by the University; or
- hold such other qualifications as deemed acceptable by the University as equivalent to the above.

**PROGRAMME ENTRANCE REQUIREMENTS**

A recognised bachelor’s degree in a computing discipline such as

- Computer Studies
- Information Technology
- Computer Engineering
- Information Systems

**ENGLISH PROFICIENCY REQUIREMENTS**

Applicants whose entrance qualification is obtained from an institution where the medium of instruction is not English should also fulfil the following:

- A score of **550** (paper-based test), or **59** (revised paper-delivered test), or **79** (internet-based test)
- An overall band score of **6.5** in International English Language Testing System (IELTS)
- A score of **450** in the new College English Test Band 6 (CET-6) of Chinese mainland, or a pass in the old CET-6 test
- OR other equivalent qualifications

For more details, please refer to http://www.cs.cityu.edu.hk/academic/mscs