

STUDENT LIFE

The Department provides **student exchange and internship opportunities** to our students to gain international perspectives, global engagement and industry experience.

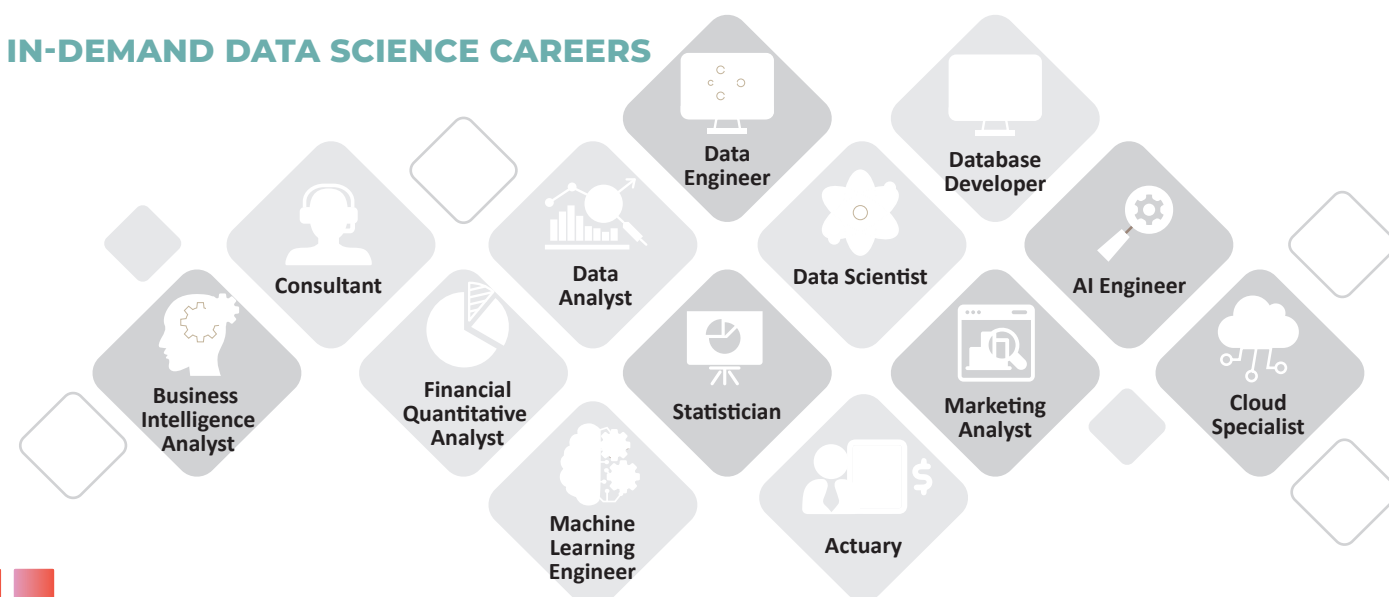
Student may choose between the overseas student exchange opportunities at world-leading institutions provided by the Department or the University. Paying the tuition at CityUHK, students will spend a study semester abroad and may transfer the academic credits earned at the host institution to fulfil the graduation requirement.

The Department also partners with premier corporates in a wide range of sectors to offer DS-privileged internship opportunities to our students. With these placements, students are expected to gain practical knowledge and hands-on experience in real-world applications. To date, the Department has set up internship arrangements with close to 100 companies.

NEEDED IN ALMOST EVERY FIELD



IN-DEMAND DATA SCIENCE CAREERS



I look forward to recruiting the talents from the CityUHK Data Science Programmes starting from 2025 and many years to come.

Ir CF CHAN
Assistant Director/Railways EMSD,
Hong Kong SAR Government

We are delighted to collaborate with CityUHK to nurture talented data scientists to advance the smart city development in Hong Kong.

Mr Jerry LI
Managing Director,
PCCW Solutions

In the ever expanding insurance industry, data science is revolutionizing the way we make decisions in key fields including customer experience, sales channels, product design, financial reporting, and risk management.

Mr Terry CHEN
Senior Manager, Actuarial Services
PricewaterhouseCoopers Limited



Department of Data Science

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City University of Hong Kong

Data Science

Join us now!

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CURRICULUM

WE PROVIDE DATA SCIENCE PROGRAMMES

City University of Hong Kong offers two unique undergraduate programmes aimed at nurturing and developing students to become data science professionals who are able to discover applicable knowledge to support social and economic development in Hong Kong and beyond.

WHAT IS DATA SCIENCE?

Data science is an interdisciplinary field that uses scientific methods, processes, algorithms and systems to extract knowledge and insights from data. It employs techniques and theories within the context of mathematics, statistics, and computer science. It can add value to businesses by utilizing their data. Data science aims to help solve many important problems ranging from smart city to management and finance.

WHY STUDY DATA SCIENCE?

Recently, businesses and industries powered by data science experience a sharp growth. Various companies and organizations in Hong Kong and beyond are developing their own data analytics units. Numerous start-ups and incubation firms focus their energy on data science. Data science has become one of the most popular and promising careers nowadays.

DEPARTMENT OF DATA SCIENCE (JS1071)

(Options: BSc Data Science, BSc Data and Systems Engineering)

Data Science focuses on solving problems and advancing societies using vast amounts of data. Students of JS1071 will have a free choice of majors (BSc Data Science or BSc Data and Systems Engineering) after one year of study.

WHY US?



AI, COMPUTING, AND TRANSFORMATION [ACT] (JS1070)

ACT is a specialized programme designed for ambitious students driven to excel in the field of data science.

Upon admission, students will study a comprehensive common first year curriculum, after which they will have the freedom to choose their preferred stream options:

- BSc Data Science
- BSc Data and Systems Engineering

Highlighted Features:

- Personalized one-to-one advising
- Elite work placement
- Executive Mentor Scheme
- Premium opportunities for overseas exchanges and internships

Global Exposure and Global Vision:

- Sponsorship for eligible students to undergo an overseas exchange or engage in a summer programme at a prestigious overseas university.
- Priority to participate in the Cultural and Language Immersion Scheme for enhancing cross-cultural competence and global perspectives.



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- Calculus
- English and Chinese
- Linear Algebra
- Computer Programming
- Data Visualization
- Introduction to Data Science

Data Science Courses

Fundamental courses to start your study in data science

- Data Mining
- Convex Optimization
- Statistical Methods and Data Analysis
- Database Systems
- Artificial Intelligence
- Fundamentals of Machine Learning
- Python for Data Science
- Probability and Statistics

Apply your knowledge and showcase your data science capabilities

Major Elective Courses

Freedom to follow your own path and interests

You may make use of the free electives to gain domain knowledge in specific areas or even enrich your studies with a minor

BACHELOR OF SCIENCE DATA SCIENCE (JS1072)

Data Science DEEP

The programme provides essential trainings like quantitative knowledge, statistics, data mining technology and computing tools for emerging real-world applications.

In an inter-professional setting, students are given the tools to build theoretical and methodological knowledge in data science, communication skills and ethic awareness. There are three flexible areas of advanced knowledge:

Specialized Areas Become an expert in

- Statistical Learning
- Artificial Intelligence (AI)
- Social Media Analytics

Advanced Courses

- Cloud Computing
- Data Structures
- Digital Trace Analytics
- Machine Learning
- Computational Statistics
- Deep Learning

BACHELOR OF SCIENCE DATA AND SYSTEMS ENGINEERING (JS1074)

Data Science PLUS

The programme offers a solid foundation in data science and intelligent systems, where students will learn to analyse, manage and improve enterprise-class systems using big data. Graduates will be equipped with necessary tools and skills to solve emerging real-world application problems and become big data professionals in the following fields:

Specialized Areas Become an expert in

- FinTech & Decision Analytics
- Smart City
- Industrial AI

Advanced Courses

- Decision Analytics and Risk Management
- Quality Technologies
- Operations Research
- Financial Engineering and Analytics
- Reliability Engineering
- Engineering Economics

Professional Recognition

This major has been granted accreditation by the Hong Kong Institution of Engineers (HKIE), a signatory member of the Washington Accord under which all members agree to recognise each other's accredited Engineering degree programmes.