The Data Science and Technology (DSCT) program is jointly offered by the School of Science and the School of Engineering. Various business and industry sectors have a huge demand for data specialists / scientists to conduct an in-depth analysis of the valuable datasets collected during the business process. The program will equip students with various mathematical tools, data analytical skills and IT technologies to make sense of data obtained from various sources.

DSCT students use a wide spectrum of mathematical and IT tools to develop basic knowledge of data analysis and programming skills that will allow them to understand and analyze actual phenomena of massive data obtained from rich information sources. Additionally, students will receive hands-on experience and expert guidance to acquire practical skills in data analysis that will provide them with an excellent step in their future. Areas of expertise in this program include machine learning, classification, clustering, data mining, database management, cloud computing, data visualization, etc.
Program Curriculum

The DSCT program combines basic knowledge of data analytics, programming skills, mathematical and computational background, which provides students an excellent foundation a solid foundation for their future career.

The DSCT program is a tech-based program. We provide students with a solid foundation in the fundamental and in-depth knowledge in special areas.

- It emphasizes on students’ mathematical and computational disciplines.
- Students will receive hands-on experience and expert guidance to acquire practical skills of data analysis that will provide them a good step to their future.

Intended Learning Outcomes

- The ability to understand data problems arising in the areas of commerce and industry etc.
- The ability to model data problems using different mathematical tools.
- The ability to design and implement efficient algorithms to solve different mathematical models for data problems.
- The ability to interpret the results provided by different algorithms and apply them to the data problems to gain meaningful insights or offer predictions.

Applications of Data Science and Technology

- Gaming
- Recommendation System
- Commercial Data Analytics
- Social Media Analytics
- Digital Marketing
- Self-Driving System
- Speech Recognition
- Smart Cities and Urban Analytics
- Fintech
- Personalized Medicine
**Career Prospects**

A lot of data specialist/scientist positions are created every day in various business and industry sectors to make use of the massive datasets collected there. Graduates of data science and technology is of high demand in today’s job market, and most of them will be employed in those sectors such as IT, engineering, and finance. There will be other career opportunities such as management, it and sales etc. Below are some examples:

- Data Scientists
- Data Engineers
- Data Analysts
- Deep Learning Research Scientist
- Data Management Specialist
- Strategic Cloud Engineer

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**Enrichment Activities**

Students in the DSCT program can enjoy all the student services and facilities provided by both Schools:

- Exchange programs offered by the School of Science and School of Engineering
- Internship opportunities referred by the Department of Mathematics and the Department of Computer Science and Engineering
Words from DSCT Student

I got my first internship opportunity in the summer of my sophomore year and gained experiences on conducting several projects and research with the professors. Besides, I joined an exchange program held by the School of Science in my junior year, which broadened my horizons and utterly changed the way I viewed the world. For me, studying DSCT at HKUST is one of the best choices I’ve ever made!

Daniel KAO
BSc in Data Science and Technology, with additional major in Computer Science, Class of 2023

Admissions Requirements

Prospective students interested in the DSCT program should first enter the Science (Group A) program from the School of Science (JUPAS Code: 5102) or the Engineering program from the School of Engineering (JUPAS Code: 5200) through the JUPAS school-based admissions scheme. After admitted to HKUST, students can opt to declare Data Science and Technology as the major upon completion of the first year of study.

Students will be required to take the following courses prior to enrollment into the major program:

• Calculus IA / Calculus IB / Honors Calculus I, and
• Calculus II / Honors Calculus II / Accelerated Calculus, and
• Introduction to Computer Science / Introduction to Computing with Java

JOIN DSCT PROGRAM
GO BEYOND YOUR LIMITS
FIND TRANSFORMATION HERE

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