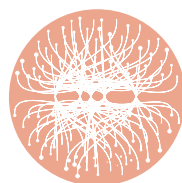# BSc in
Data Analytics in Science (DASC)

In this big data era, an enormous amount of data is continuously generated and obtained in almost every science, technology, and social science field. Data Analytics in Science is a major program designed for science students who want to learn data analysis skills and practise them in various science disciplines.

School of 理學院
Science

Program Highlights

The recent development in big data and data driven techniques has a big impact across many areas in the society. It also changed how education and research are done in different areas of science. Many scientific fields are driven by data. Consequently, science programs are ready to provide training fields for students to practice various data analytical skills. This program is not a conventional science program. Conventional science education programs focus more on data collection through experiments and observations.

This program is structured in such a way that students will be equipped to analyze, present, and draw sound conclusions from data in context, using knowledge of statistical inference and computational processes. This program also distinguishes itself from most other Data Science programs in that students are not only trained in data analytical skills. The ultimate purpose is to bring these techniques into practice in a data-intensive scientific field. Another unique feature of this program is that all graduates will acquire certain knowledge in social analytics, which is a data-intensive area of growing importance.

Program Curriculum

The curriculum starts with basic training in programming and computational skills, as well as analytic methods and statistics, and data visualization. Students will then declare one of the following study tracks at the start of Year 3 to practise and sharpen their skills.

Courses in the tracks are not meant to train students to be experts in the corresponding fields, but rather to bring them into the context of a domain of data-intensive research in science.
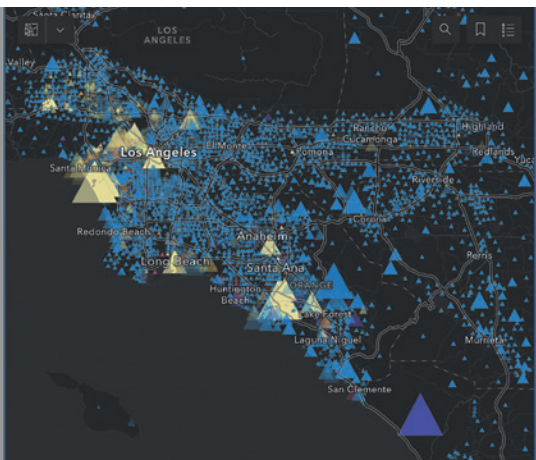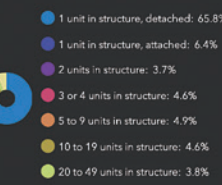
Applied Biosciences Track

Environmental Science Track

Career Prospects

We see tremendous new applications of data analytics these years. In the business world, techniques from data analytics help draw sharper insights into their customers, and improve the operational, manufacturing and computational efficiencies. In Fintech, data analytics can effectively predict the stock price, design new financial products, detect fraud transactions, etc. Graduates with training in data analytics are in extremely high demand in today's job market.

Words from DASC Student

As an international student, studying DASC at HKUST brings many new experiences to me. Its unique materials give challenging yet memorable knowledge throughout university life. In fact, we are able to learn so many things here, the subjects are so fun to learn as a science student while the professors are indeed amiable. In addition, as some of the courses are project-based grading and I got to choose my own programming projects, I learned and upgraded my programming techniques not only on my own but also from the feedback that the professor gave throughout the class. As a result, it creates my university life so much more special.

Defvan Firdy GUNAWAN
BSc in Data Analytics in Science, Class of 2025

Information Science Track

Molecular Science and Cheminformatics Track

Admissions Requirements

Prospective students may apply for the *Science (Group A) program (JS5102)* though direct choice in the JUPAS / Non-JUPAS admissions scheme.

Upon completion of the major pre-requisite courses at the end of the first year, students can declare major in Data Analytics in Science.

The pre-requisite courses include :

- MATH 1012 Calculus IA / MATH 1013 Calculus IB / MATH 1023 Honors Calculus I, and

- MATH 1014 Calculus II / MATH 1024 Honors Calculus II

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School of Science – Undergraduate Admissions

Tel : (852) 2358 5065
Email : ugscience@ust.hk
Website : science.hkust.edu.hk
Facebook : @hkust.science
Instagram : @hkust.ug.science

DASC Program Office

Tel : (852) 2358 7505
Email : ugdasc@ust.hk
Website : dasc.hkust.edu.hk

DASC website

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