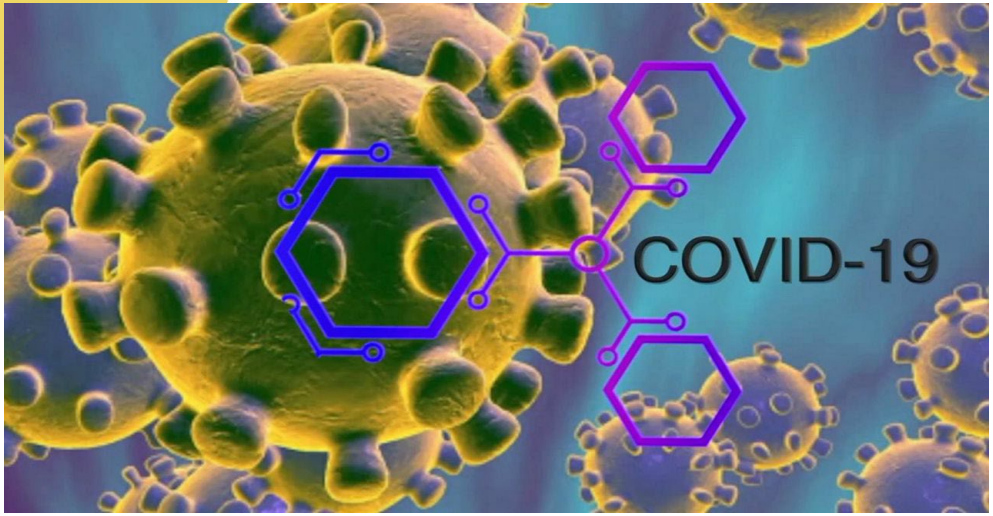
Bachelor of Arts and Sciences in Social Data Science [BASc(SDS)] A203

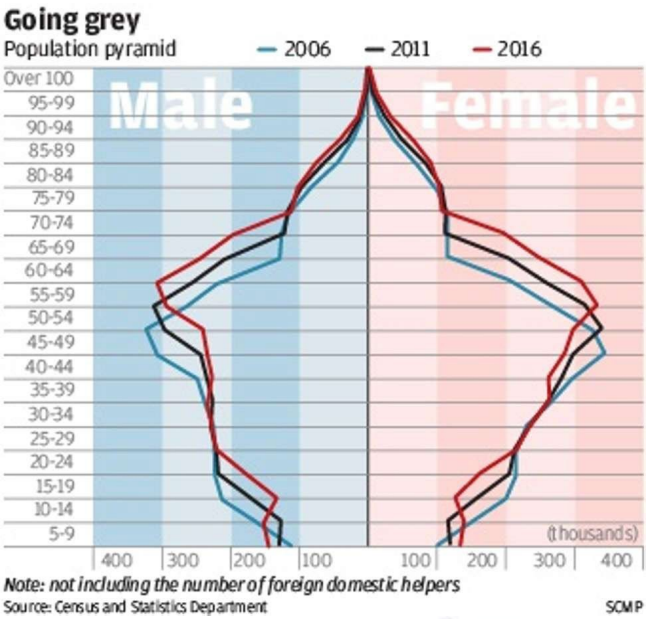
Updated in October 2023

Faculty of Education
The University of Hong Kong

Welcome!

What is Social Data Science?





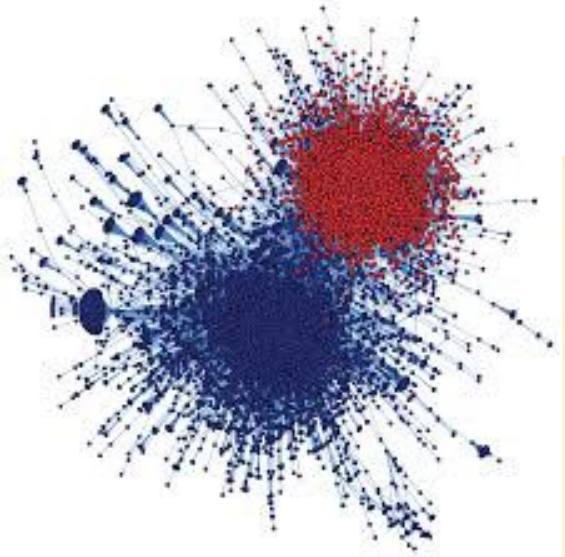


Fig sources:
https://aecm.eu/corona-information/ https://climate.nasa.gov/effects/
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Social Data Science

- Our rapidly changing society is now driven by digital data, and our decision-making is often situated in social contexts and influenced by societal, economic, political and technological factors.

- Social data science aims to drive and catalyse new ways of thinking when analysing and applying data in the context of the social sciences

- Social data science is an area having strong demand in the twenty-first century and it is expected to grow globally and locally across settings.

Why Social Data Science?

- Gain an in-depth understanding of social phenomena
- Support evidence-based decision-making
- Develop novel approaches for addressing societal challenges
- Inform the design and evaluation of social services and policies
- Prepare for the future
- …

BASc(SDS) Programme

- By bringing together different disciplines from the **Faculties of Education**, **Science and Social Sciences**, we are positioning the BASc(SDS) as a senior year entry programme for sub-degree holders.

- As one of the six Bachelor of Arts & Sciences (BASc) programms at HKU, BASc(SDS) programme takes an interdisciplinary approach, integrating from information science, computer science, mathematics, statistics, and social sciences, to cultivate students' knowledge and technical skills in addressing social issues and societal challenges.

Upon graduation from this programme, students will be able to:

- Identify social impact and decision-making process based on the digital data and information
- Demonstrate skills and knowledge in data science and computation through operating with tools and techniques for analysing, visualising, and modelling data
- Synthesise interdisciplinary knowledge and skills in social computation and statistical tools for analysis/analytics to solve real world problems
- Build awareness of social informatics and data science in research and identify controversies and initiatives in the region and the globe
- Apply the design principles and emerging methodologies with information technology from the social informatics perspectives in solving social challenges
- Design basic solutions in addressing social, economic or political inquiries and challenges

Why studying BASc(SDS) at HKU?

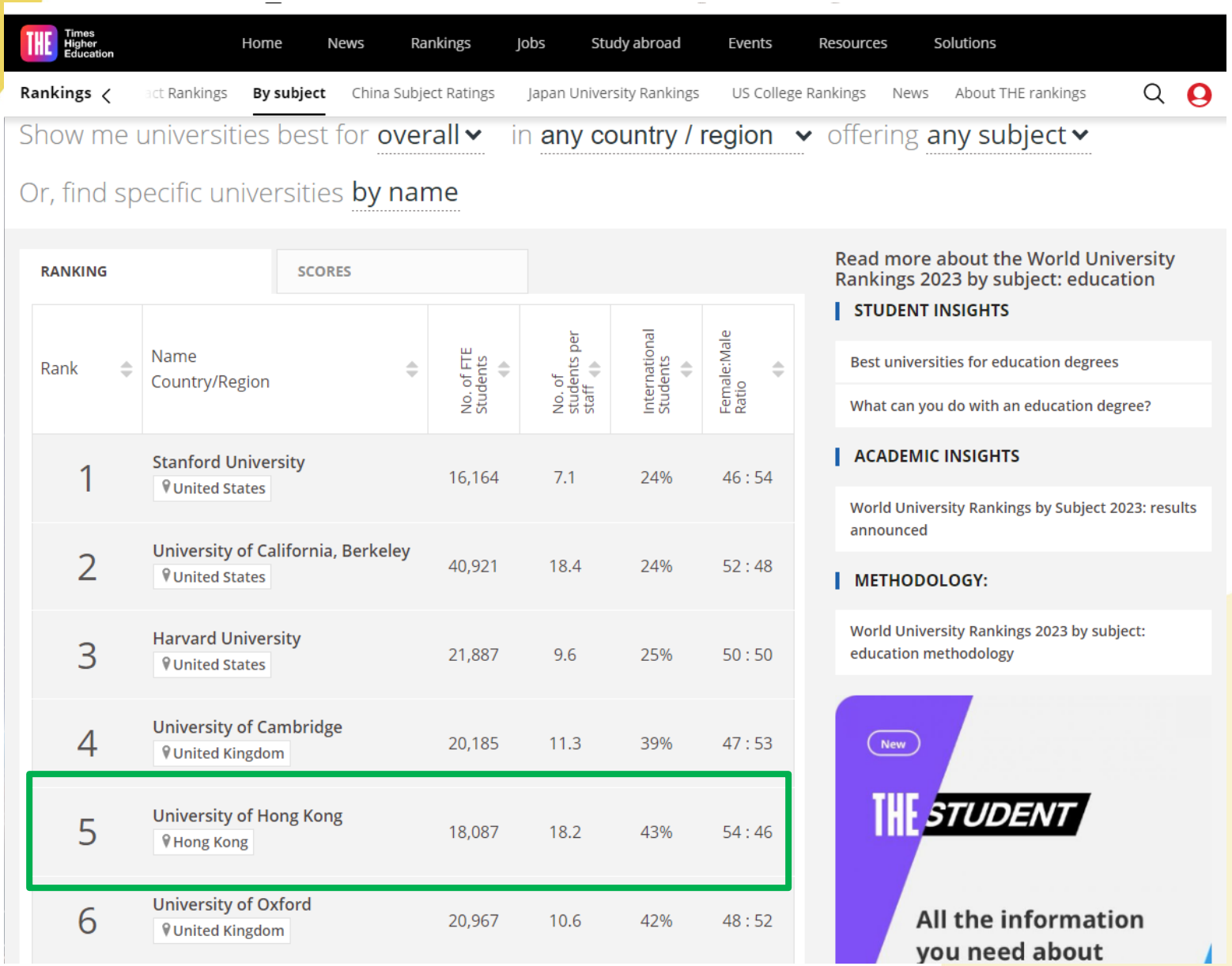
Why Faculty of Education, HKU?

THE World University Rankings by Subject:

- **World Number 5 (2023)**

QS University Subject Rankings:

- **World Number 8 (2023)**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News
About THE rankings
Show me universities best for overall in any country / region offering any subject
Or, find specific universities by name
RANKING
SCORES
Rank
Name
Country/Region
No. of FTE Students
No. of students per staff
International Students
Female:Male Ratio
1 Stanford University United States 16,164 7.1 24% 46 : 54
2 University of California, Berkeley United States 40,921 18.4 24% 52 : 48
3 Harvard University United States 21,887 9.6 25% 50 : 50
4 University of Cambridge United Kingdom 20,185 11.3 39% 47 : 53
5 University of Hong Kong Hong Kong 18,087 18.2 43% 54 : 46
6 University of Oxford United Kingdom 20,967 10.6 42% 48 : 52
Read more about the World University Rankings 2023 by subject: education
STUDENT INSIGHTS
Best universities for education degrees
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ACADEMIC INSIGHTS
World University Rankings by Subject 2023: results announced
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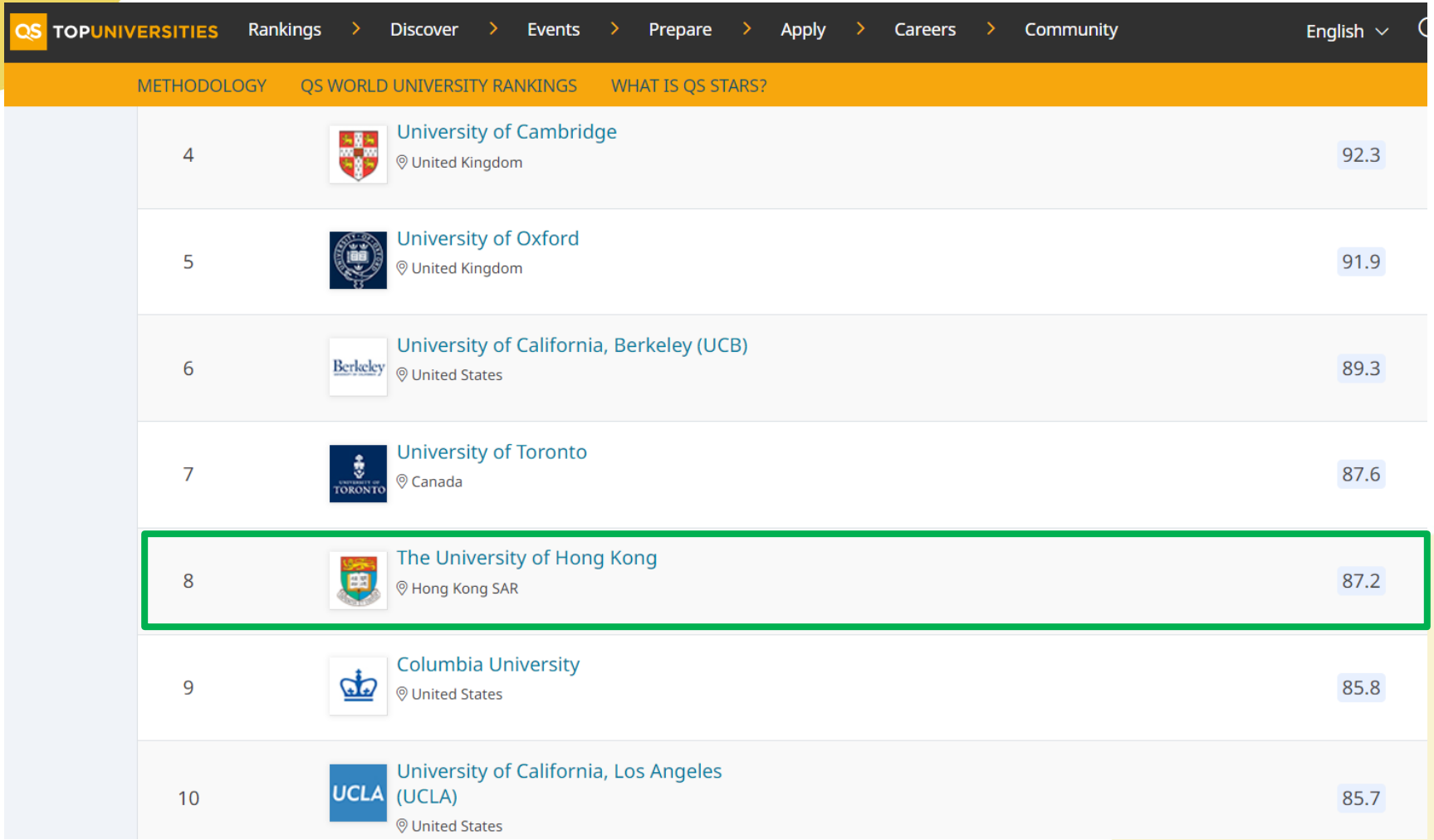
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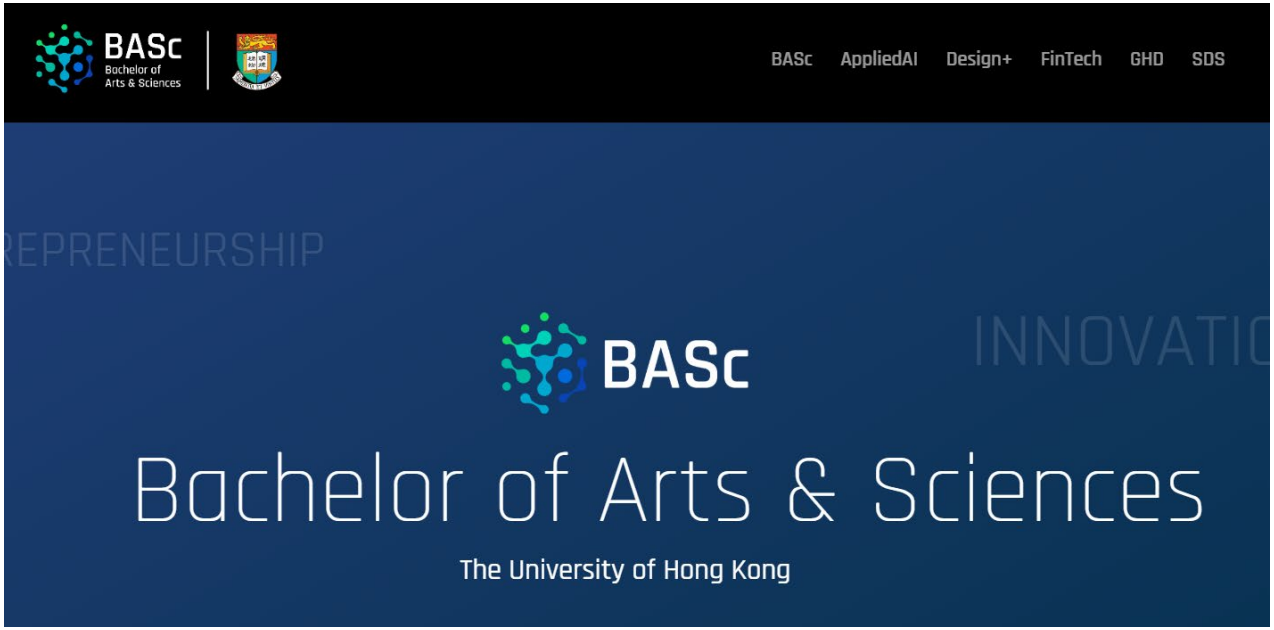
WHAT IS QS STARS?
4
University of Cambridge
United Kingdom
92.3
5
University of Oxford
United Kingdom
91.9
6
University of California, Berkeley (UCB)
United States
89.3
7
University of Toronto
Canada
87.6
8
The University of Hong Kong
Hong Kong SAR
87.2
9
Columbia University
United States
85.8
10
University of California, Los Angeles (UCLA)
United States
85.7



The **Bachelor of Arts & Sciences** degrees, involving all ten faculties, are aimed at nurturing **globally-minded** thinkers and leaders able to leverage their **interdisciplinary** knowledge and skills to address the contemporary and future challenges of our increasingly complex world.

BASc | HKU
Bachelor of Arts & Sciences

Our suite of six Bachelor of Arts & Sciences (BASc) degrees span all ten faculties and offer students a unique opportunity to acquire and integrate knowledge and skills from across a diverse array of disciplines.

Although each of our BASc programmes differs in their exact focus, each of them is aimed at nurturing globally-minded thinkers and leaders who are passionate about addressing the contemporary and future challenges of our increasingly complex world.

AI

Applied AI

D+

Design+

FT

FinTech

https://basc.hku.hk/

GHD

Global Health and Development

IS

Interdisciplinary Studies

SDS

Social Data Science

Demand for graduates in social data science

- Data scientist roles have grown over 650% since 2012, creating 11.5M jobs by 2026, according to the U.S. Bureau of Labor Statistics.
- The demand for data science platform solution and data scientists is expected to grow faster in Asia due to its economic prosperity and advanced technological infrastructure, in particular in dealing with new forms of data with a focus on social, economic, and political aspects.
- **Local demand**: the importance of data technology, data analytics, and data services as stipulated in the Chief Executive's 2023 Policy Address to set up a $10 billion New Industrialisation Acceleration Scheme – To promote the downstream development of new industrialisation with financial assistance for enterprises in the fields of life and health technologies, AI and data science, advanced manufacturing, and new energy technologies.

What jobs does this degree feed into?

Potential graduates in this programme will be qualified to work in different fields. Industries with high demand for knowledge and skills of social data science include:

- Innovative and information technologies
- Marketing, financial services and consulting
- Health care, academia and education
- Government, public services and NGOs

Highlights of graduate positions

Our graduates are highly sought after upon graduation. Here are highlights of companies and positions of our graduates:

Company	Position
Hong Kong Disneyland	AI Engineer
Hong Kong International Airport	Business Analyst
PCCW Limited	Data Analytics Associate
PricewaterhouseCoopers (PwC)	Laboratory Data Analyst
The University of Hong Kong	Senior Recruitment Consultant

Programme Structure and Features

BASc(SDS) senior year programme

There is no Year 1 or Year 2 admission.
Successful applicants will be admitted directly to Year 3 of this four-year programme.

	Total
Major in SDS	72
Common Core Courses (in 2 different Areas of Inquiry)	12
English Language Enhancement	6
Free Electives	30
Total	**120**

72-credit Major in Social Data Science

- Core courses (54 credits)
- Advanced Elective Courses
  (18 credits; choose 6 credits from each Faculty)

Core Courses (54 credits)

Introductory courses (24 credits)

- ❑ Social data science foundations
- ❑ Social computing: Methods and applications
- ❑ Data structure and algorithm
- ❑ Introduction to statistics

Advanced courses (18 credits)

- ❑ Data warehousing and data mining
- ❑ Application of big data analytics in social sciences / Advanced social data analysis
- ❑ Introduction to R/Python programming and elementary data analysis

Capstone courses (12 credits)

- ❑ Internship
- ❑ Project

Advanced Elective Courses (18 credits)

Students must choose one course from each of the Faculties of Education, Science and Social Sciences

I. Faculty of Education

BSIM3017 Database systems (6 credits)
BSIM3021 Web development, users and management (6 credits)
BSIM3025 Multimedia and human-computer interaction (6 credits)
BSIM4011 Project management (6 credits)
BSIM4020 Information society issues and policy (6 credits)
BSIM4022 Management information systems (6 credits)
BSIM4024 Fundamentals of object-oriented programming (6 credits)
BSIM4027 Selected topics in information management (6 credits)
MLIM6319 Information behavior (6 credits)
MLIM7350 Data curation (6 credits)

Advanced Elective Courses (18 credits)

II. Faculty of Social Sciences

GEOG1020 Modern maps in the age of big data (6 credits)
GEOG2090 Introduction to geographic information systems (6 credits)
GEOG2152 Health and medical geography (6 credits)
GEOG3417 Health, wellbeing, place and GIS (6 credits)
POLI3039 Public policy analysis (6 credits)
POLI3080 Global political economy (6 credits)
POLI3131 In search of good policy: an introduction to policy evaluation (6 credits)
PSYC2071 Judgements and decision making (6 credits)
SOCI2080 Media and culture in modern societies (6 credits)
SOWK2023 Social policy issues in Hong Kong (6 credits)
SOWK2131 Behavioural economics for social change (6 credits)
SOWK3091 Mental health sciences and society (6 credits)

III. Faculty of Science

STAT2605 Demographic and socio-economic statistics (6 credits)
STAT3612 Statistical machine learning (6 credits)
STAT3613 Marketing analytics (6 credits)
STAT3617 Sample survey methods (6 credits)
STAT3622 Data visualization (6 credits)
STAT4011 Natural language processing (6 credits)
STAT4601 Time-series analysis (6 credits)
STAT4609 Big data analytics (6 credits)

Programme features

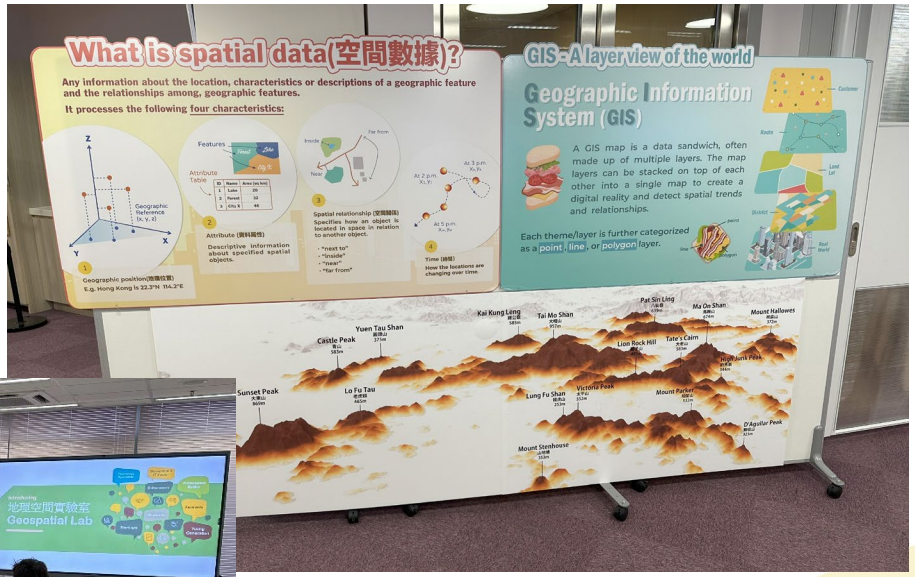
- **Exchange Programme** - To foster students' international understanding, the programme encourages them to study overseas in well-established universities through academic exchange.
- **Partnerships with Industry** - Students will apply what they learn in their academic studies in real-life situations by working on social data science related projects through internship experience in a selected organisation.
- **Final Year Project (FYP)** - Students will apply a wide range of research methods and skills in a social data science project to complete a significant piece of work under supervision.

Partnerships with Industry

- Many **industry experts** participate in our programme as advisors, co-lecturers, and guest speakers.
- Students will apply what they learn in their academic studies in real-life situations by working on social data science related projects through **internship experience** in a selected organisation.
- The course provides opportunities for the application of social data science **knowledge and techniques** to practical situations, such as marketing, corporate setting, consulting, health care, financial services, and retail and consumer services.

Extra-curricular activities

Guided tour to Geospatial Lab of Development Bureau, HKSAR Government



Dr Ann Mak, GeoLab Manager, conducts an introduction on spatial data and Geographic Information System

A hands-on workshop to illustrate the six functions of a GIS software:
Capture, store, display, spatial query, spatial analyses, output and share

Social gathering at BASc Lounge

New students mingle with current students and teachers at the beginning of their exciting learning journey

Group photo
[with Prof Pauline Chiu, BASc Director and Associate Vice President (Teaching & Learning)]

Hear What Our Graduate Says

Why did you choose BASc(SDS)?

"The BASc(SDS) programme allows me to use data-driven methodologies to understand human behaviour and address societal issues effectively, which is the evolution direction of all social sciences and the growing societal needs on candidates' skill sets."

What is your favourite thing in the BASc(SDS) programme?

"My favourite aspect of the BASc(SDS) programme is to explore the intersection of different disciplines. The progress of such allows me to gain a comprehensive understanding of various subjects and their interconnectedness. This interdisciplinary approach encourages critical thinking and creative problem-solving, which I found incredibly stimulating and rewarding."

In what ways has the BASc(SDS) programme changed you?

"The changes in me, and probably others as well, are very obvious. Data science itself is merely a teaching of analytical skills and a learning of research methodologies. The collaboration of such a subject with other subjects offered by the University made the picture complete: I have thereafter been able to apply my learned data science skills to explore the studies about the legal system innovatively."

What is your most memorable experience at HKU, particularly related to the BASc(SDS) programme?

"…The supportiveness of facilities and academic staff from BASc(SDS) programme for your research emphasises that HKU is a right choice."

What is your advice to prospective students who are considering the BASc(SDS) programme?

"To embrace curiosity and take full advantage of the interdisciplinary learning opportunities, is not just the requirement of a student, but also the demand of the society. Within this programme, multiple opportunities are provided to collaborate with peers from various backgrounds, as they will bring unique perspectives and insights to your learning experience."

What information you would give to prospective students and their families who are wondering whether the BASc(SDS) is a worthwhile investment?

"Before participating in the BASc(SDS) programme, a very crucial piece of information is to understand the programme's emphasis on developing versatile skills and fostering adaptability. In today's rapidly changing job market, employers increasingly value individuals who possess a diverse skill set and can quickly adapt to new challenges which are exactly highly sought after by employers. There are more than opportunities and resources offered by this programme and this University. Students may have all their wished development through this interdisciplinary nature doors to a wide range of career paths."

Admissions Requirements

Admissions requirements

- **Local graduates** of recognised full-time **Associate Degree (AD)** or **Higher Diploma (HD)** programmes of at least two years in duration from community colleges in Hong Kong in relevant disciplines, such as Data Science and Analytics, Engineering, Computer Science, Information Technology, Statistics, Applied Science, Social Sciences.
- **Final-year local students** studying such programmes may also apply and their applications will be considered subject to their successful completion of the programme by August 2024.
- **Intake quota for 2024-25: 30**

Admissions requirements

- **IELTS 7** or equivalent *(strongly encouraged to take multiple attempts until achieving good score)*
- **HKDSE Mathematics Level 3**
- **Good GPA**
- Leadership and life experience could be considered

  → 1-2 pages summary preferred
- Prefer applicants placing BASc(SDS) as **1st choice**
- Shortlisted applicants will be invited to an interview in **March 2024**

Application

- Apply through **Admissions to Senior Year Places (Direct Admissions Scheme)**
- Programme code: **A203**
- Apply by **noon, November 15, 2023** (Main round)
- Late application is accepted by **noon, August 22, 2024**
- Places are being filled all the time, you are advised to apply for admissions **as early as possible**.
- Admissions details: https://admissions.hku.hk/apply/hong-kong-sub-degrees
- Programme website: https://web.edu.hku.hk/programme/bsds

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Programme Overview and Aims

BASc Bachelor of Arts & Sciences

SDS Social Data Science

Enquiries Information

Application & Admissions

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Academic Matters

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shihuife@hku.hk

Programme Pamphlet

https://web.edu.hku.hk/programme/bsds **bascsds@hku.hk**

Hope to see you soon!