

Admissions Requirements

JUPAS Applicants

Minimum Programme Entrance Requirements:



- Elective subjects can be any Category A subject, one of them must be a Science subject
- Candidates with level 4 in English Language and good results in other HKDSE subjects will be exceptionally considered on a case by case basis. If these candidates are admitted, they will be required to take 6 additional credits in University English to complete their degree studies

Non-JUPAS Applicants

Students holding non HKDSE qualifications are considered individually

Useful Information

HKU Undergraduate Admissions
www.aal.hku.hk/admissions

Contacts for Further Information

For BSc, BSc(ActuarSc) & BASc(AppliedAI)
 Faculty of Science
www.scifac.hku.hk
 3917-2683
science@hku.hk

For BEd & BSc
 Faculty of Education
web.edu.hku.hk/programme/bedbsc_6119
 3917-4659
bedbsc@hku.hk

For BASc
 Faculty of Social Sciences
www.socsc.hku.hk/basc/
 3917-1207
socscug@hku.hk

SCIENCE



Undergraduate Programmes

2020
|
2021



- SPECIAL FEATURES**
- Intensive Majors
 - Accreditations
 - Minor in Science Entrepreneurship
 - Articulation Pathways
 - Interdisciplinary BASc Programmes



[@science.hku](https://www.facebook.com/science.hku) [@hku_science](https://twitter.com/hku_science) [@hku_science](https://www.instagram.com/hku_science)



Why HKU Science?

High University Rankings



#25

QS
World University
Rankings 2020

#2

QS
Asia University
Rankings 2019



#36

THE
World University Rankings 2019

#4

THE
Asia University Rankings 2019



Global Experience

Committed to nurturing students as global citizens

Targeting at **100%** overseas experience by 2022

Examples of overseas experiences

- Worldwide exchange studies
- Overseas Research Fellowships
- Field trips
- Summer courses
- International scientific conferences
- Internships

International Environment

About **40%** academic staff in the Faculty are from overseas

#1
The Most International University in the World



Top-ranked Scientists

(Clarivate Analytics' Essential Science Indicators 2018)

16% of professoriate staff in the Faculty are the world's **top 1%** scholars

Career Prospects

Essentially **100%** employment rate (inclusive of further studies) in the past decade

Our Departments

Department of Earth Sciences



Department of Mathematics



Department of Physics



Department of Statistics & Actuarial Science



School of Biological Sciences

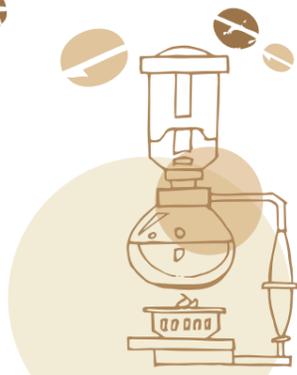


Department of Chemistry



SPECIAL FEATURES

for Science curricula



1

Specialisation and intensive training make experts

- Chemistry (Intensive)
- Ecology & Biodiversity (Intensive)
- Geology (Intensive)
- Mathematics (Intensive) **NEW**
- Molecular Biology & Biotechnology (Intensive)
- Physics (Intensive) **NEW**

Intensive Majors

2

Quality assured through recognition by international professional bodies

- Chemistry Major
- Ecology & Biodiversity Major
- Geology Major
- Molecular Biology & Biotechnology Major

Accreditations

3

Seamless articulation to widely recognised postgraduate programmes

- Taught Postgraduate Programmes at HKU Science
- Master of Science in Biotechnology at Northeastern University
- Doctor of Veterinary Medicine (DVM) at University of Melbourne (UoMelb)

Articulation Pathways

4

Opening the doors to entrepreneurship

- visualises how training in science bears relevance to the real world

Minor in Science Entrepreneurship

5

Opening up new perspectives

- 6224 Bachelor of Arts and Sciences (AppliedAI)
- 6212 Bachelor of Arts and Sciences

Interdisciplinary BSc Programmes

Bachelor of Science BSc



Empowers scientific intellectuals to formulate solutions to society's challenges

The Programme

One entry in the application, with a free choice of 14 Science Majors and 6 Intensive Majors:

- | | |
|---|--|
| Biochemistry | Geology |
| Biological Sciences | Geology (Intensive) ³ |
| Chemistry | Mathematics |
| Chemistry (Intensive) ¹ | Mathematics (Intensive) |
| Decision Analytics | Molecular Biology & Biotechnology |
| Earth System Science | Molecular Biology & Biotechnology (Intensive) ² |
| Ecology & Biodiversity | Physics |
| Ecology & Biodiversity (Intensive) ² | Physics (Intensive) |
| Environmental Science | Risk Management |
| Food & Nutritional Science | Statistics |

Notes:
¹ It follows the Accredited Royal Society of Chemistry Programme
² It follows the Accredited Royal Society of Biology Programme
³ It follows The Geological Society Accredited Programme

Unique Features

- Tackling novel situations:** Nurtures a scientifically literate population to address the global challenges that human faces and makes wise decisions informed by scientific understanding
- Career prospects:**
 - The Faculty has got essentially 100% employment rate (inclusive of further studies) in the past decade
 - Many of our graduates are holding positions that demand scientific expertise, such as environmental scientists, nutritionists, clinical scientists, meteorologists, geologists, information specialists, financial analysts, teachers and forensic scientists
 - Our graduates are preferred by employers because of their numerical analytical skills, logical thinking, and critical thinking



Simple and Flexible

- One entry in application for a choice of 14 Majors and 6 Intensive Majors
- Up to 2 years time to choose a Major
- Flexibility in changing Majors

Key Features of Our BSc Curriculum



1 Major / 2 Majors / Major-Minor / Major-2 Minors

- Students may take a 2nd Major or a Minor or 2 Minors in Science or non-Science disciplines

No Quota for Any Science Major

Academic Advising System

- One-on-one academic advice

BSc Curriculum Structure (240 Credits)

Forty 6-credit courses spanning over 4 years of full-time study



Intensive Majors

Specialism and intensive training make experts



- Offered alongside with the regular 96-credit Majors
- Provide students with extensive subject knowledge
- Equip students who intend to pursue research in science
- Listed in the transcript
- Having an advantage at job application and when seeking chartered status

* Fulfill the accreditation requirements of various royal societies in the UK

Curriculum Structure for BSc (Intensive Majors) (240 Credits)

Spanning over 4 years of full-time study



Accreditations

Quality assured through recognition by international professional bodies

01 Both the Ecology & Biodiversity Major and Molecular Biology & Biotechnology Major have been conferred the accreditation



Royal Society of Biology, UK

02 The Ecology & Biodiversity Major is the first programme of its type accredited by RSB in Asia

04 Graduates will receive one year of guest membership of RSB at Associate level and this will help them to:

- > stay up-to-date with what is happening across the life sciences
- > gain additional recognition for their skills and experience
- > develop their professional network and
- > demonstrate their support for the future of biology

03 Students completed the RSB accredited programme will be awarded a certificate by the School of Biological Sciences, with authorisation by the RSB, to recognise their achievements

01 Exclusively for students who wish to specialise in chemistry



Royal Society of Chemistry, UK

02 Students completed the RSC accredited Chemistry programme will be awarded a certificate by the Department of Chemistry, with authorisation by RSC, to recognise their achievements

03 All students in the final year of this accredited programme are qualified to apply for membership to RSC

01 Students completed specified geology courses will receive an accredited degree which provides an accelerated route to achieve the qualification



The Geological Society, UK

02 Students completed the Geological Society accredited programme will be awarded a certificate by the Department of Earth Sciences, with the authorisation by the Geological Society, to recognise their achievements

03 Qualification recognised internationally and in Hong Kong, and chartered geologists are regarded as professionally equivalent to chartered engineers

Young Scientist Scheme (YSS)

Early Research Experiences for Outstanding Students in 6901 BSc Programme

YSS participants are guaranteed to go on exchange, visiting or summer study in a top university



Who are eligible to join YSS?

In 2019, 30 students were admitted to YSS

Non-JUPAS

Selected Non-JUPAS applicants will be invited to enrol in YSS

JUPAS

Best 5 HKDSE
Score of subjects* ≥ 35
- automatically accepted to YSS
- no interview is necessary

* including Category A subjects, M1/M2

Notes:

6901 BSc students not admitted to YSS on entry but show excellent talent afterwards would still:

- have a second chance to enrol in YSS at a later stage
- be able to compete for SRF, ORF and/or international exchange during their study

The HKDSE 'level to score' conversion

Category A Core and Elective Subjects and Extended Module 1 or Module 2 of Mathematics							
Level	1	2	3	4	5	5*	5**
Score	1	2	3	4	5.5	7	8.5

Students in YSS are guaranteed with:

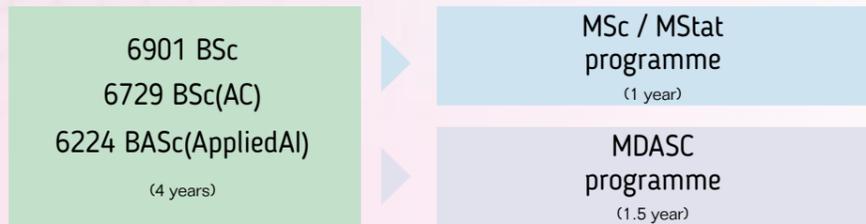
- 1 Summer Research Fellowship (SRF)
- 2 A further SRF or an Overseas Research Fellowship (ORF)
- 3 International exchange, visiting or summer study
- 4 Attendance to an international scientific conference
- 5 A research mentor
- 6 Enrolment in the Frontiers of Science Honours Seminar
- 7 Stipends for research activities
- 8 Entrance scholarship

Articulation Pathways

Seamless articulation to widely recognised postgraduate programmes

To Taught Postgraduate Programmes at HKU Science

- An articulation pathway attaching 6901 Bachelor of Science, 6729 Bachelor of Science in Actuarial Science and 6224 Bachelor of Arts and Sciences in Applied Artificial Intelligence to master programmes at HKU Science
- Provides a convenient channel of specialised training for deepening knowledge in specific fields of science, with guaranteed admission to the taught postgraduate programmes offered by the Faculty to selected outstanding students
- Upon successful completion in 5/ 5.5 years, students will be able to obtain a BSc/ BSc(ActuarSc)/ BASc(AppliedAI) degree (4 years) plus a MSc/ MStat degree (1 year) or MDASC degree (1.5 years). The taught Master Programmes offered include:
 - + Master of Data Science (MDASC)
 - + Master of Statistics (MStat)
 - + MSc in Environmental Management
 - + MSc in the field of Applied Geosciences
 - + MSc in the field of Food Industry: Management and Marketing
 - + MSc in the field of Food Safety and Toxicology



- Application is open to students who have completed year 3, with a CGPA of 3.5 at graduation and fulfillment of the MSc/ MStat/ MDASC admissions requirements
- There is no quota for the aforementioned articulation pathway except that for Master of Data Science, a maximum of 2 places will be offered each year

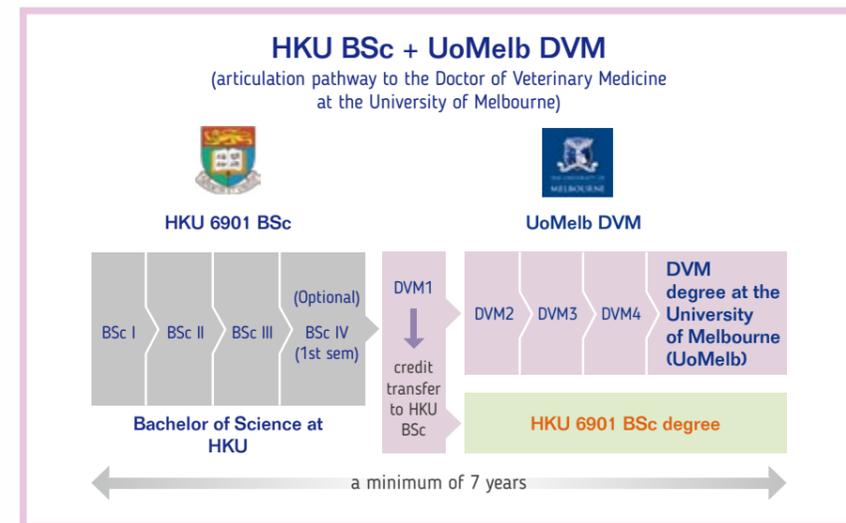
Remark: the list of TPG programmes for this articulation pathway is subject to change

To the Master of Science in Biotechnology at Northeastern University

- HKU Science graduates with a GPA of 3.2 or above will be eligible for direct admission to the programme
- Admitted students may elect to complete the first year of course work online, and then transfer to Northeastern's Boston or California campus to complete the remaining studies

To Doctor of Veterinary Medicine (DVM) at University of Melbourne (UoMelb)

- In collaboration with University of Melbourne (UoMelb) in Australia, HKU Science will provide a pathway to BSc 6901 students of the following majors to articulate into the DVM of the UoMelb:
 - + Biochemistry
 - + Biological Sciences
 - + Ecology & Biodiversity
 - + Molecular Biology & Biotechnology
 - + Food & Nutritional Science
- Provides a new pathway to talented students who aspire to pursue a career in veterinary
- Facilitates selected HKU science undergraduates, upon successful completion of a minimum of 6 semesters and gaining 186 credits under BSc 6901 programme, to enrol in DVM at UoMelb
- Credits obtained during the first year of DVM at UoMelb can be transferred to HKU as electives, subject to relevant HKU regulations, for the purpose of fulfilling the credit requirements of the BSc programme
- Students obtain 2 degrees from the 2 universities – the HKU BSc degree and the DVM in UoMelb in as fast as 7 years
- A maximum of 5 places will be offered annually to accommodate selected HKU BSc students who demonstrate good academic achievements
- Students will pay HKU fees and UoMelb fees for their study at HKU and UoMelb respectively
- Graduates can register as veterinary surgeons and practise in HK through Veterinary Surgeons Board of Hong Kong and in many countries such as Australia, UK and US



About DVM at UoMelb

- The UoMelb is a renowned university in the global arena and its DVM programme ranks 17th in Veterinary Science of QS World University Rankings 2019
- Accredited by Australasian Veterinary Boards Council Inc. (Australia), American Veterinary Medical Association (USA) and Royal College of Veterinary Surgeons (UK)

Diverse Learning Experiences



International Exchange Studies

• Over 300 partner universities in more than 40 countries, including:

North America

- University of California • University of Chicago
- Columbia University
- Johns Hopkins University
- Stanford University • Yale University

Europe

- University of Cambridge
- University of Oxford
- Imperial College London

Undergraduate Research Experiences

• Overseas Research Fellowship (ORF)

Examples:

North America

- California Institute of Technology
- Columbia University • Cornell University
- MIT • Stanford University
- University of California at Berkeley
- University of California at Los Angeles

Europe

- CERN • University of Cambridge
- University College London

• Summer Research Fellowship (SRF)

• Undergraduate Research Colloquium

- Final-year projects
- Directed studies



Field Trips

• Provide students with hands-on learning experience outside classroom

Examples of field trip destinations:

- Kenya • Thailand
- USA • Australia
- Japan

• Career Success Programme

• Enable students to apply knowledge in the workplace

• Prepare students for their career

Examples of internship opportunities:

- Government bodies • Scientific laboratories
- Non-government agencies/ NGOs
- Commercial companies

Career Preparation & Internships



Minor in Science Entrepreneurship

Opening the doors to entrepreneurship

This Minor aims at:

Broadening the horizon of our undergraduate students with respect to entrepreneurship

Offering more competitive edge to our students via connecting their academic knowledge with the real world

Bringing students huge insights via critical analysis of the operation of existing enterprises

Some highlights of the Minor:

- Co-taught by other Faculties such as Faculty of Business and Economics
- Strong emphasis on practical experience:
 - > Internship
 - > Capstone project
- Mentoring offered by entrepreneurs or senior staff in industry/business
- Incorporates new courses tailor-made for this Minor such as organisational behaviours, leadership, principles of technology entrepreneurship, science-based innovation development, strategic marketing and user analysis



6224

Bachelor of Arts and Sciences in Applied Artificial Intelligence BASc(AppliedAI)

Impacts the world with the limitless power of AI

Highlights AI applications in diverse areas so that students can develop the intellectual capacity essential to meeting new challenges

Gives students both fundamental and practical knowledge in the design and construction of intelligent systems so that they can apply their skills in a variety of career settings

The Programme

Supported by a wide range of courses in computer science, geography, mathematics, psychology, statistics, and urban studies which emphasise problem-based learning

Nurtures students to transfer interdisciplinary scientific knowledge into a range of integrated applications and technological innovations

Unique Features

- Interdisciplinary programmes for elite students:** Provides formal academic training to elite students who wish to join the AI profession
- Featured concentrations:** AI technology, AI in business and finance, AI in medicine, AI in smart city, and AI in neurocognitive science



Career prospects: Connects the exploding demand of the AI market in diverse areas: science and technology, environmental protection, medical informatics, health care, business, banking, finance, urban development, neurocognitive science, etc.

Interdisciplinary training: Facilitates a coordinated approach to teaching and learning across different disciplinary fields in collaboration with the Faculties of Engineering, Social Sciences and Architecture

BASc(AppliedAI) Curriculum Structure* (240 Credits)

Spanning over 4 years of full-time study

UNIVERSITY EDUCATION
Language Courses
Common Core Courses
36 credits



BASc CORE COURSES
18 credits



PROGRAMME CORE
Core Courses
Concentration & Electives
Capstone Course
96 credits



2nd MAJOR / MINOR(S) / ELECTIVES
90 credits

*May subject to change

6729

Bachelor of Science in Actuarial Science BSc(ActuarSc)

A gateway to the actuarial profession with internationally-recognised qualifications

The Programme

Provides specialist academic and professional training to students in actuarial science

Prepares students for professional examinations to Associateship level

UK – Institute and Faculty of Actuaries
North America – Casualty Actuarial Society, and Society of Actuaries

Accredited by professional body, while graduates will be exempted from various professional examinations (subject to re-accreditation)

UK – Institute and Faculty of Actuaries

Validation by Educational Experience (VEE) obtained

North America – Casualty Actuarial Society, Society of Actuaries, and Canadian Institute of Actuaries

Internship opportunities with major insurers, actuarial consulting firms, reinsurers, investment firms, auditing firms, and management consulting firms



Unique Features

- Specialisation:** The ONLY programme of its kind in Hong Kong
- Professional recognition:** The Department of Statistics & Actuarial Science has been designated a Centre of Actuarial Excellence by the Society of Actuaries since 2011
- Career prospects:** Given Hong Kong's booming insurance industry and the rapid development of the mainland China market, actuaries enjoy very attractive career prospects. Recent graduates hold positions in major insurance and reinsurance companies, actuarial consulting firms, and investment banks



Dr Patrick S C Poon Scholarship in Actuarial Science

- 5 scholarships are awarded annually to freshly-admitted first year students with outstanding entrance records, each at HK\$50,000 or HK\$60,000
- Renewable based on satisfactory performance in each year's study in the programme

BSc(ActuarSc) Curriculum Structure (240 credits)

Forty 6-credit courses spanning over 4 years of full-time study



*Additional credits required



Bachelor of Arts and Sciences BASc

Interdisciplinary programmes

6212

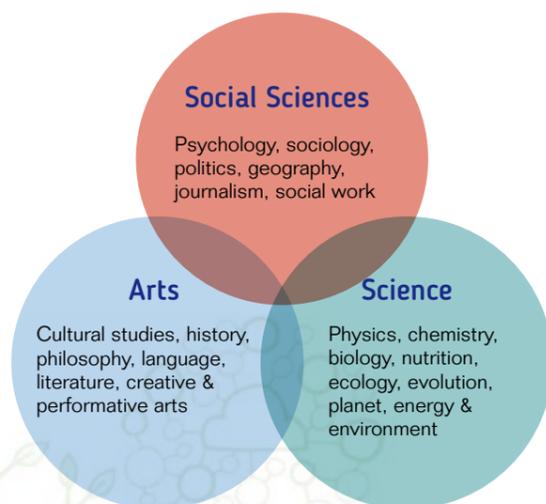
Nurtures future global leaders to make changes in interconnected world

The Programme

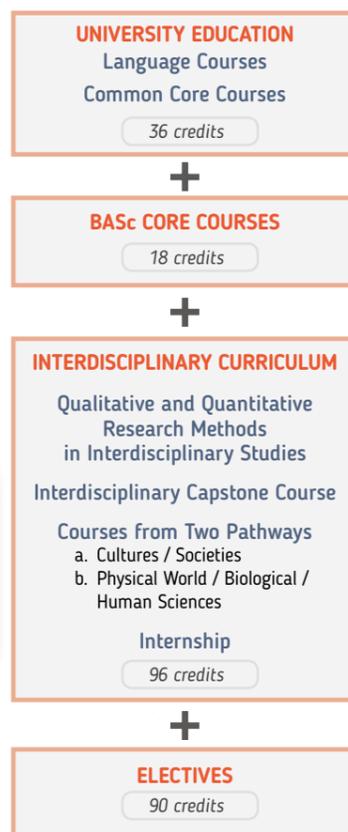
- 📍 An intrinsically integrated programme co-offered by the Faculties of Social Sciences, Arts and Science
- 📍 Designed for intellectually ambitious students who want to develop a broad set of scholarly skills in order to become leaders across a diverse range of fields to meet important global challenges
- 📍 Equips students with social intelligence, creative problem-solving, analytical skills, communication skills, ethical responsibility and interdisciplinary perspective in understanding our world

Unique Features

- 💡 **Interdisciplinary major:** Students take disciplinary courses from the 3 Faculties and also elective courses within 2 pathways: (1) Cultures/ Societies and (2) Physical World/ Biological/ Human Sciences
- 💡 **Developing intellectual toolkit:** Learn how to intertwine knowledge from various disciplines and integrate them together through case studies, capstone learning, and experiences of thought leaders in professions
- 💡 **Career prospects:** Wide career prospects in government, management consultancy, public relations, banking, public policy, environmental services, museum, heritage or science writing/ journalism, and non-governmental organisation work, etc.



BASc Curriculum Structure* (240 Credits) Spanning over 4 years of full-time study



*May subject to change



6119

Bachelor of Education and Bachelor of Science BEd & BSc

Consolidates scientific knowledge through practical experience and teaching in science

The Programme

- 📍 5-year Double Degree Programme
- 📍 Offered jointly by the Faculty of Education and the Faculty of Science
- 📍 Integrated programme offering both academic and professional studies
- 📍 Requires students to complete 300 credits of course units including:
 - Science courses to fulfill the requirement of a Science Major
 - Education Professional core courses with the Faculty of Education

Unique Features

- 💡 **Professional training:**
 - Incorporates a graduate teaching qualification equivalent to a BSc plus a Postgraduate Diploma in Education
 - Pedagogy courses and Teaching Practice in Hong Kong secondary schools
- 💡 **Career prospects:**
 - Thorough knowledge of Science subject, broad understanding of educational issues, and high level of classroom expertise prepare graduates for teaching Science at all levels in local secondary and international schools
 - Graduates also find employment opportunities in industrial and government sectors in which BSc graduates are often employed

BEd & BSc Curriculum Structure (300 Credits) Spanning over 5 years of full-time study

