



SHKU
Science

FACULTY OF SCIENCE
THE UNIVERSITY OF HONG KONG
香港大學理學院

Science

Undergraduate Programmes

2022
|
2023



Create Your Unique Colour of Science

6901 Bachelor of Science

6688 Bachelor of Science & Master of Research
(Science Master Class)

NEW 6858 Bachelor of Science and Bachelor of Laws
(5-year Double Degree Programme)

6729 Bachelor of Science in Actuarial Science

6224 Bachelor of Arts and Sciences (AppliedAI)

6212 Bachelor of Arts and Sciences

6119 Bachelor of Education and Bachelor of Science
(5-year Double Degree Programme)

Programmes We Offer

6901 Bachelor of Science

Empowers scientific intellectuals to formulate solutions to society's challenges

Key features:

- Simple and flexible
- One entry in the application, with a free choice of 14 Science Majors and 7 Intensive Majors
- Options of 1 Major / 2 Majors / Major-Minor / Major-2 Minors
- No quota nor GPA requirement for any Science Major
- Academic Advising System

6688

Bachelor of Science & Master of Research (Science Master Class)

Incubates the next generation of scientists

Key features:

- Fast-track for completing 2 degrees
- Learning from Science Masters
- Catering the needs of elite students
- Research-oriented

Double Degree Programme

5-year Double Degree Programme

6858

Bachelor of Science and Bachelor of Laws

Nurtures professionals with scientific and legal knowledge in a STEM-driven society

Key features:

- First of its kind in Hong Kong
- Fast-track for completing 2 degrees in science and law
- Interdisciplinary training for STEM talents and legal professionals
- Free choice of 14 Science Majors
- Articulation to Postgraduate Certificate in Laws (PCLL) as a step towards professional legal qualification

6729 Bachelor of Science in Actuarial Science

A gateway to the actuarial profession with internationally recognised qualifications

Key features:

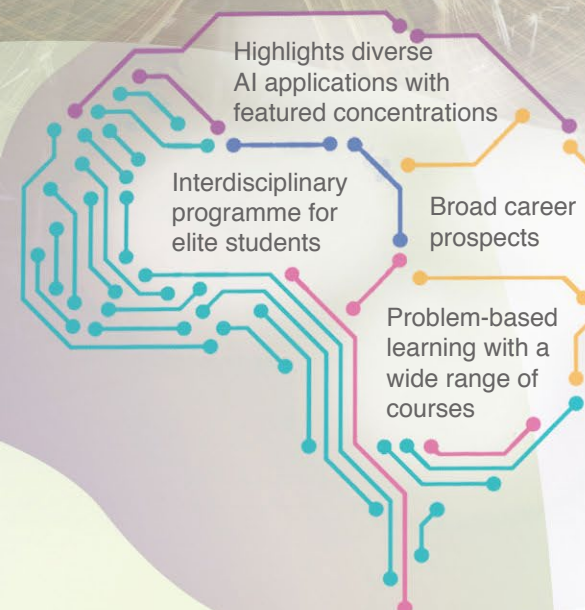
- Only programme in Hong Kong accredited by the Institute and Faculty of Actuaries
- Provides specialist academic and professional training
- Internship opportunities and career prospects in major insurance companies, actuarial consulting firms, investment banks, etc.

6224

Bachelor of Arts and Sciences (Applied Artificial Intelligence)

Impacts the world with the limitless power of AI

Key features:



6212

Bachelor of Arts and Sciences

Nurtures future global leaders to make changes in an interconnected world

Key features:

- Unique programme for elite students to develop a broad set of scholarly skills
- Well-designed study pathways:
 - 1) Cultures/ Societies
 - 2) Physical World/ Biological/ Human Sciences
- Wide career prospects

6119

Bachelor of Education and Bachelor of Science

Consolidates scientific knowledge through practical experience and teaching in science

Key features:

- Covers both academic and professional studies
- Incorporates a graduate teaching qualification
- Development opportunities not just in education, but also in industrial and government sectors



High University Rankings



QS Asia University Rankings 2021

QS World University Rankings 2022

#4 #22



THE Asia University Rankings 2021

THE World University Rankings 2022

#4 #30

Global Experience

Committed to nurturing students as **global citizens** with overseas experiences such as:

- Worldwide exchange studies
- Overseas Research Fellowships
- Field trips
- Overseas 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 (THE World University Ranking 2021)

Top-ranked Scientists

(Clarivate Analytics' Essential Science Indicators 2020) **16.5%** of professorial staff in the Faculty are the world's **top 1%** scholars

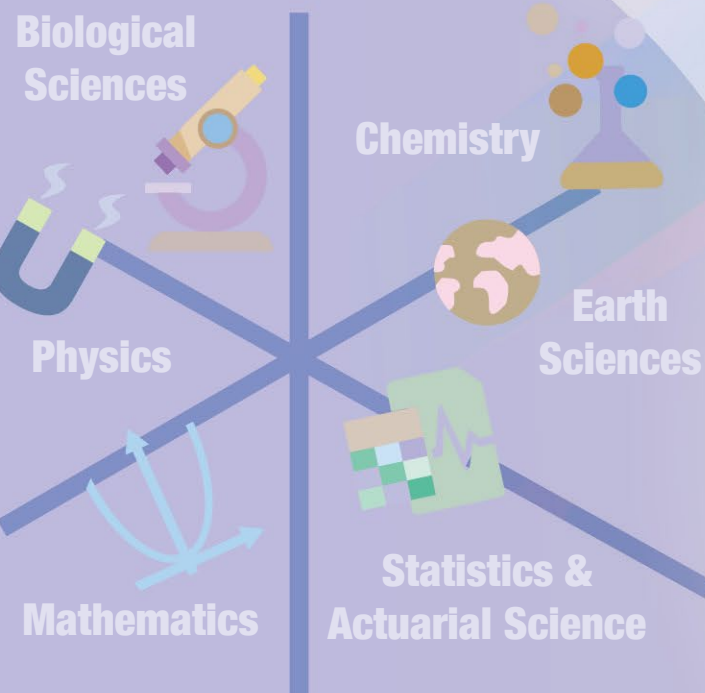
Career Prospects

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

Why

HKU Science

Departments



Special Features for Science curricula

1 Young Scientist Scheme (YSS)

– Ample early research experiences for outstanding students in the 6901 BSc Programme and 6688 Science Master Class Programme



2 Cambridge-track under YSS

– HKU-Cambridge Undergraduate Recruitment Scheme (Natural Sciences) for selected YSS participants
 • Earning 3-4 degrees upon successful completion of 2 years of studies at HKU and 2-3 years of studies at Cambridge



3 Intensive Majors

– Specialisation and intensive training make experts

- Biological Sciences (Intensive)
- Chemistry (Intensive)
- Ecology & Biodiversity (Intensive)
- Geology (Intensive)
- Mathematics (Intensive)
- Molecular Biology & Biotechnology (Intensive)
- Physics (Intensive)

4 Accreditations

– Quality assured through recognition by international professional bodies

- Hong Kong Institute of Qualified Environmental Professionals
- Royal Society of Biology, UK
- Royal Society of Chemistry, UK
- The Geological Society, UK
- Institute and Faculty of Actuaries, UK



5 Articulation Pathways

– Seamless articulation to widely recognised postgraduate programmes

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

6 Minor in Science Entrepreneurship

– Opening the doors to science entrepreneurship

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

6688

BSc&MRes

SCIENCE MASTER CLASS

Incubates the next generation of scientists

This elite programme

- Provides a fast-track of study for talented students: completing 2 degrees at an accelerated pace
- Caters specifically to the needs of science-inclined students, with more learning opportunities, intensive training and inspirations
- Allows research-aspired students to immerse themselves in an authentic research environment and learn from Grand Masters and Masters with diverse backgrounds in Science
- Incubates the next generation of dynamic scientists who are able to translate scientific knowledge into practical applications with far- and wide-reaching impacts

Programme information

	BSc	MRes
Study load 303 credits for 2 degrees	240 credits	63 credits
Class schedule	Full time	
Academic advising	<ul style="list-style-type: none"> Students in the programme will be given individual advice to properly plan their study Each student will be assigned an academic adviser at the start of the study to guide them through the whole study 	
Tuition fees	Local: HKD 42,000/year Non-local: HKD 171,000/year	HKD 120,000* (full course)

* Scholarships will be provided to cover at least 50% of the tuition fee of the MRes programme

What the Programme covers

Fast-track for completing 2 degrees

Bachelor of Science + Master of Research

Remarks: Students in the programme have to maintain a high CGPA in order to remain in this double degree programme or else they have to switch to the 6901 BSc programme

Learning from Science Masters



Grand Masters through special tutorials



Masters as academic advisers

Catering to the needs of elite students



disciplinarily-based intensive study for research-aspired students



ample opportunities available in our flagship Young Scientist Scheme (YSS) including

- Summer Research Fellowship
- Entrance scholarship
- Overseas Research Fellowship
- Chance to join the Cambridge-track*
- Exchange study
- International conference attendance

* – only available to Majors in Natural Sciences disciplines
– candidates will then follow the track if admitted to Cambridge successfully

Research-oriented



Research postgraduate courses and research projects to enhance students' scientific method and research skills

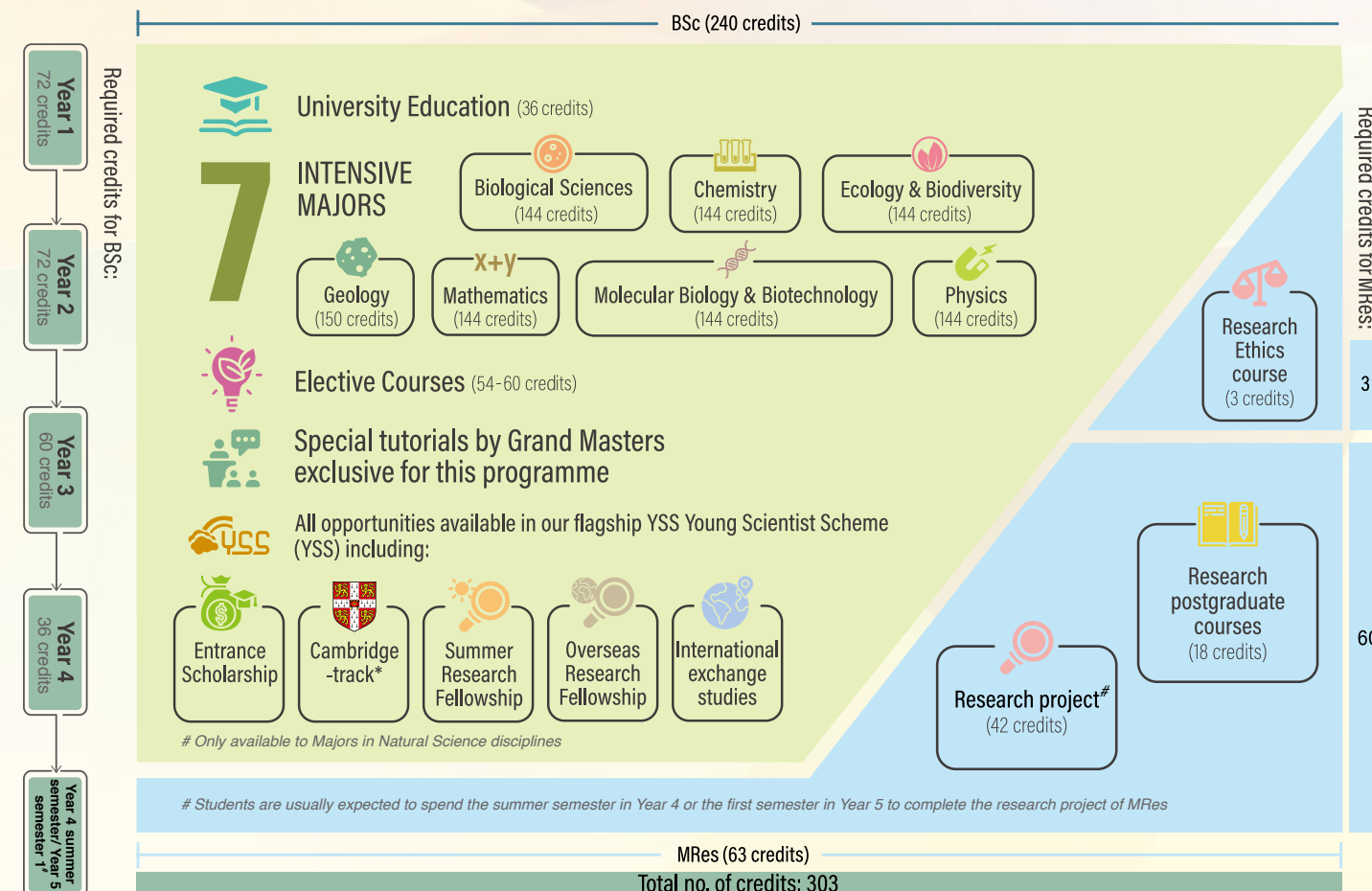
Learning from Renowned Scientists including

- Members of Chinese Academy of Sciences
- Members of Academy of Sciences of Hong Kong
- Members of Hong Kong's Young Academy of Sciences
- International Member for US National Academy of Sciences
- Foreign Member of Academia Europaea
- Awardees of State Natural Science Awards
- A number of highly cited scientists

Scan to learn more about our Science Masters



What You will Learn



Where this Programme will lead you to

Professional recognition



5 Intensive Majors* fulfill accreditation requirements of various societies in the UK



Biological Sciences (Intensive)
Ecology & Biodiversity (Intensive)
Molecular Biology & Biotechnology (Intensive)



Geology (Intensive)

Chemistry (Intensive)

* There is no accreditation available in the fields of Mathematics and Physics

Career development & network

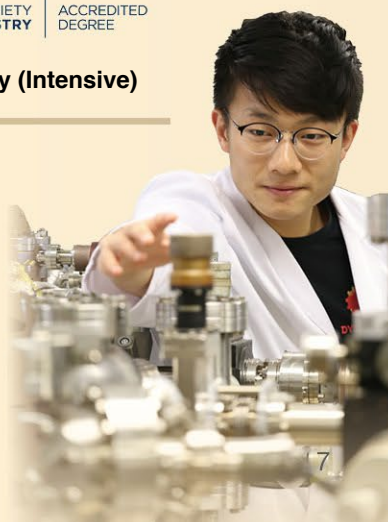


- Nurtures students who intend to pursue research in science
- After completing the BSc and the MRes, students will be fully equipped to further pursue graduate studies in prominent universities overseas or in HKU
- Builds a consortium of young researchers for cross fertilisation of innovative ideas and facilitate possible multidisciplinary projects

Transferable skills



- Provides students with extensive subject knowledge and specialised training
- Nurtures a scientifically literate population to formulate solutions for challenges



6858

BSc&LLB

Bachelor of SCIENCE & Bachelor of LAWS

Nurtures professionals with scientific and legal knowledge in a STEM-driven society

NEW Double degree programme
Attaining 2 degrees in 5 years

Bachelor of Science + Bachelor of Laws
5 years



Interdisciplinary knowledge and skills in science and law

Legal Professional

The Programme



Offers **first of its kind** in Hong Kong for students who intend to develop expertise in both law and science



Cultivates **legal and scientific mindsets** for academic talents



Feeds into the development of **STEM talents** who are capable of handling a wide variety of innovation-related matters such as patent applications



Copes with the soaring demand of **patent practitioners and legal professionals** in the technology industry

World rankings of Law 2021:



#21



#21

World rankings of Science 2022:



#42

in Life Sciences

#53

in Physical Sciences



#52

in Natural Sciences



What You will Learn

	Year				Total	
	1	2	3	4&5		
Science	18	18	18	42	96	Disciplinary courses in Science, including capstone course
Law	36	30	30	60	156	Compulsory courses, interdisciplinary core courses capstone course, disciplinary electives
Law and science interdisciplinary electives	–	–	–	12	12	Law and science interdisciplinary electives
University Education	6	12	12	6	36	Core University English, Practical Chinese for Science students, Common Core
					300	300 credits in 5 years

What the Programme Covers

- LAWS**
- Foundational legal concepts and systematic honing of professional skills such as critical thinking, analytical and problem-solving skills, etc.
 - Valuable experiential learning opportunities
 - Mooting competitions
 - Clinical legal education

SCIENCE

- Scientific knowledge & research skills
 - Lectures, laboratory and workshops courses

INTERDISCIPLINARY

- Cross-disciplinary knowledge, analytical and evaluation skills
- Independent research experience with original thinking
 - Research projects
 - Field camps and Project-based courses
- Work experience
 - Internships
 - Placements

Where this Programme will lead you to

Career developments

- Joining commercial or intellectual property firms as patent agents or professionals focusing on business development in innovative and technology firms
- Solicitors, barristers or in-house counsel specialising in intellectual property/ technology matters
- Entrepreneurs in biotechnology industry
- Government/ policy-makers/ regulatory officials handling IT, copyright, data protection, etc.
- Environmentalists specialising in animal and environmental law
- Researchers or academics in the fields of science or law

Transferable skills

- Provides students with extensive subject knowledge and specialised training in law
- Nurtures a scientifically literate population with legal knowledge to formulate solutions for challenges

Articulation

- Eligible to apply for the Postgraduate Certificate in Laws (PCLL) after completing the double degree programme
- In a position to apply for other postgraduate programmes in law or science



6901

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 **7 Intensive Majors**:

- | | | |
|--|--|--|
| <ul style="list-style-type: none"> Biochemistry Biological Sciences Biological Sciences (Intensive)¹ Chemistry Chemistry (Intensive)² Decision Analytics Earth System Science | <ul style="list-style-type: none"> Ecology & Biodiversity Ecology & Biodiversity (Intensive)¹ Environmental Science⁴ Food & Nutritional Science Geology Geology (Intensive)³ Mathematics | <ul style="list-style-type: none"> Mathematics (Intensive) Molecular Biology & Biotechnology Molecular Biology & Biotechnology (Intensive)¹ Physics Physics (Intensive) Risk Management Statistics |
|--|--|--|

Remarks:

¹ Accredited by The Royal Society of Biology, UK² Accredited by The Royal Society of Chemistry, UK³ Accredited by The Geological Society, UK⁴ Accredited by Hong Kong Institute of Qualified Environmental Professionals

- Tackling novel situations:** Nurtures a scientifically literate population to address the global challenges that human faces and to make wise decisions informed by scientific understanding

Career prospects:

- The Faculty has 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

Options of 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

Simple and Flexible

- One entry in application for a choice of 14 Majors and 7 Intensive Majors
- Up to 2 years time to choose a Major
- Flexibility in changing Majors

BSc Curriculum Structure (240 Credits)

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

UNIVERSITY EDUCATION
Language Courses
Common Core Courses
54
credits

PRIMARY SCIENCE MAJOR
Science Foundation Courses
Disciplinary Courses
Capstone Courses
96
credits

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

Academic Advising System

- One-on-one academic advice

Key Features of Our BSc Curriculum

No Quota nor GPA requirement for any Science Major

Intensive Majors

Specialisation 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
- Have an advantage in job application and when seeking chartered status

Intensive Majors

Biological Sciences
(144 credits)*

Chemistry
(144 credits)*

Ecology & Biodiversity
(144 credits)*

Geology
(150 credits)*

Mathematics
(144 credits)

Molecular Biology & Biotechnology
(144 credits)*

Physics
(144 credits)

* Accredited by various professional bodies in the UK

Intensive Majors

Curriculum Structure (240 Credits)

Spanning over 4 years of full-time study



UNIVERSITY EDUCATION
Language Courses
Common Core Courses
54
credits

INTENSIVE SCIENCE MAJOR
Science Foundation Courses
Disciplinary Courses
Capstone Courses
144-150
credits



MINOR(S) / ELECTIVES
36-42
credits



Young Scientist Scheme

Ample Early Research Experiences for Outstanding Students in the 6901 BSc Programme & 6688 Science Master Class Programme

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



Students in YSS are guaranteed with:

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

*Scholarships for Non-JUPAS students are considered on case-by-case basis

In 2021, **46** students were admitted to YSS

NON-JUPAS

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

JUPAS

6901 students with best 5 HKDSE Score of subjects* ≥ 35 (*Category A subjects, M1/ M2) and 6688 students

- automatically accepted to YSS
- no interview is necessary

Notes:
BSc students in 6901 BSc Programme 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 in Mathematics

Level	1	2	3	4	5	5*	5**
Score	1	2	3	4	5.5	7	8.5

Who are eligible to join YSS?



HKU-Cambridge Undergraduate Recruitment Scheme (Natural Sciences)

Cambridge-track for Selected YSS Participants in Natural Sciences Disciplines

SPECIAL FEATURE

HKUer or Cantab?
Why not BOTH?



Earning 3-4 degrees upon successful completion of 2 years of studies at HKU and 2-3 years of studies at Cambridge

The Track

- A joint recruitment scheme that allows selected YSS students to pursue studies in two renowned universities
- Allows students to study abroad and experience overseas life and culture
- Nurtures future science professionals to develop innovative solutions for global challenges
- Ample learning opportunities in YSS
 - Summer Research Fellowship
 - Overseas Research Fellowship
 - International scientific conference
 - Guidance by research mentor

2 years at HKU + 2+1 years at Cambridge

OR

2 years at HKU + 2 years at Cambridge

= BSc(HKU)* + BA(Cantab) + MA(Cantab)* + MSci(Cantab)

Regular major will be listed on transcript when conferring BSc(HKU) to 6688 students
* The MA is conferred by right on holders of the BA degree at Cambridge, upon application after certain years' seniority as members of Cambridge

Study Path for YSS Students in the Cambridge Scheme

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
HKU	HKU Undergraduate Degree Available for students majoring in: <ul style="list-style-type: none"> • Biochemistry • Biological Sciences • Chemistry • Earth System Science • Ecology & Biodiversity • Environmental Science • Geology • Molecular Biology & Biotechnology • Physics 				
CAMBRIDGE			Cambridge Undergraduate Degree Specialisation for a Natural Sciences degree at Cambridge in year 4: <ul style="list-style-type: none"> • Astrophysics • Biochemistry • Chemistry • Earth Sciences • Genetics • Materials Science • Pathology Or a broad Science programme: <ul style="list-style-type: none"> • Biological & Biomedical Sciences • Physics • Physiology, Development & Neuroscience • Plant Sciences • Zoology • Physical Sciences 		Cambridge Master's Degree <ul style="list-style-type: none"> • Astrophysics • Biochemistry • Chemistry • Earth Sciences • History and Philosophy of Science • Materials Science • Physics • Systems Biology

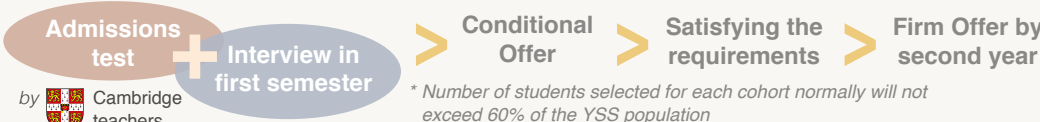
How to Enroll in the Cambridge-track

JUPAS Band A applicants and selected Non-JUPAS applicants of 6901 and 6688 will be invited to indicate their interest in the Cambridge-track. Those interested will undergo a selection process including an admissions test and an interview.

Basic Subject requirements:

JUPAS M1/M2 in Mathematics;
Level 5 in English Language
NON-JUPAS IB: HL Mathematics
GCEAL: Mathematics and Further Mathematics
Other Qualifications: Excellent results in Mathematics

Admissions of Students on the Cambridge-track to Cambridge



- Remarks:
1. Students will study 3 science subjects in Year 3 to get prepared for the specialisation in Year 4.
 2. Students who do NOT opt for a Master's degree at Cambridge will take research internships at HKU to fulfill the University's graduation requirements.
 3. Students will pay HKU fees and Cambridge fees for their study at HKU and Cambridge, respectively.



Cambridge-track at YSS
qr.go.page.link/C8cec



Natural Sciences Tripos at Cambridge
qr.go.page.link/HnmPR

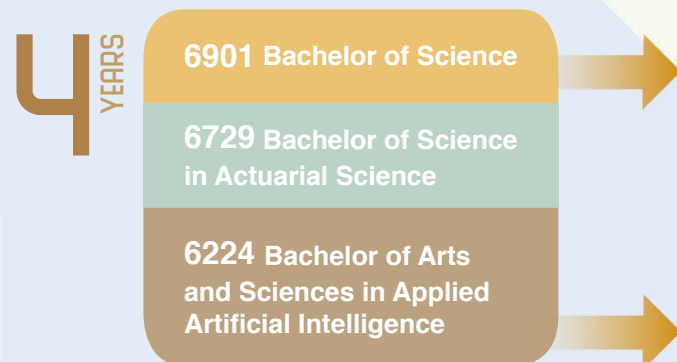
Articulation Pathways

Seamless articulation to widely recognised postgraduate programmes

Taught Postgraduate Programmes

@ HKU Science

- Attach Bachelor Programmes to HKU Science Taught Master Programmes



Full-time study mode of 1 year or 1.5 years

- 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
- MSc in the field of Space Science
- MSc in the field of Physics
- MSc in Artificial Intelligence

1 YEAR

- Master of Data Science (MDASC)

1.5 YEARS

- **Guaranteed admission to selected outstanding students**
 - Provides a convenient channel of specialised training for deepening knowledge in specific fields of science
- **Application requirements**
 - Students who have completed year 3
 - With a CGPA of 3.5 at graduation
 - Fulfillment of the MSc/ MStat/ MDASC admissions requirements
- **Quota**
 - 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 taught postgraduate programmes for this articulation pathway is subject to change

Doctor of Veterinary Medicine (DVM)

University of Melbourne (UoMelb)

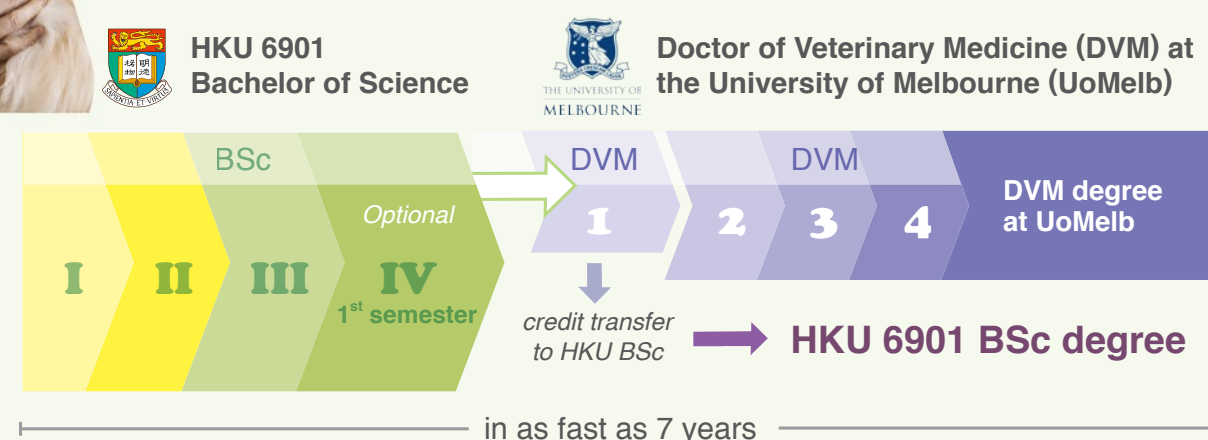
Pathway to talented students who aspire to pursue a career in veterinary

- In collaboration with University of Melbourne (UoMelb) in Australia, HKU Science provides a pathway to 6901 BSc students of the following majors to articulate into the DVM of the UoMelb:

- Biochemistry
- Biological Sciences
- Ecology & Biodiversity
- Molecular Biology & Biotechnology
- Food & Nutritional Science

HKU BSc + UoMelb DVM

articulation pathway to the Doctor of Veterinary Medicine at the University of Melbourne



- **Requirements for selected HKU Science undergraduate students**

Successful completion of a minimum of **6** semesters

gaining **186** credits under BSc 6901 programme

- **Credits obtained during the first year of DVM at UoMelb can be transferred to HKU as electives for fulfilling the credit requirements of the BSc programme** (subject to relevant HKU regulations)

- **Obtain 2 degrees from the 2 universities in as fast as 7 years**
 - the HKU BSc degree and the DVM in UoMelb

Quota: A maximum of 5 places annually

Programme fees: Students will pay HKU fees and UoMelb fees for their study at HKU and UoMelb, respectively

Career aspects: 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 @ UoMelb

- Renowned university in the global arena
- Its DVM programme ranks 18th in Veterinary Science of QS World University Rankings 2021
- Accredited by Australasian Veterinary Boards Council Inc. (Australia), American Veterinary Medical Association (USA) and Royal College of Veterinary Surgeons (UK)

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 by connecting their academic knowledge with the real world
- Bringing students huge insights through critical analysis of existing enterprises' operation



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
- Mentorship 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

Diverse Learning Experiences

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

International Exchange Studies

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

North America

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

Europe

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

Field Trips

Provide students with hands-on learning experience

Examples of field trip destinations:

- Kenya
- Australia
- Thailand
- Japan
- USA

Internships

Opportunities in:

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



Accreditations

Quality assured through recognition by international professional bodies



Hong Kong Institute of Qualified Environmental Professionals, Hong Kong

- The Environmental Science Major has been conferred the accreditation
- Students need to complete 7 specific advanced courses for the accredited pathway and can enroll in HKIQEP's Student Membership during their HKU study
- Students who graduate on the HKIQEP accredited programme will:
 - Have a fast-track to Professional Membership (only 5 years of work experience needed after the degree)
 - Be exempted from certain portions of the Professional Assessment



Royal Society of Biology, UK

- Biological Sciences, Ecology & Biodiversity and Molecular Biology & Biotechnology Intensive Majors have been conferred the accreditation
- The Ecology & Biodiversity Major is the first programme of its type accredited by RSB in Asia
- 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
- Graduates will receive one year of guest membership of RSB at Associate level, helping 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
 - demonstrate their support for the future of biology



Royal Society of Chemistry, UK

- Exclusively for students who wish to specialise in chemistry
- Students completed the RSC accredited Chemistry Intensive programme will be awarded a certificate by the Department of Chemistry, with authorisation by RSC, to recognise their achievements
- All students in the final year of this accredited programme are qualified to apply for membership to RSC



The Geological Society, UK

- Students completed specified Geology Intensive programme will receive an accredited degree which provides an accelerated route to achieve the qualification
- 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
- Qualification recognised internationally and in Hong Kong, and chartered geologists are regarded as professionally equivalent to chartered engineers

6729

Bachelor of Science in Actuarial Science BSc(ActuarSc)

A gateway to the actuarial profession with internationally recognised qualification

The Programme

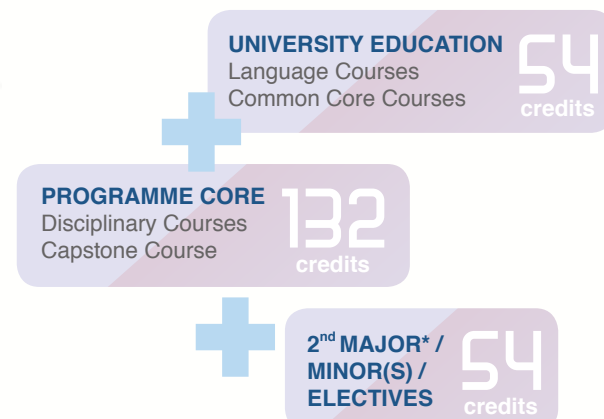
- Provides **specialist academic and professional training** in actuarial science
- Prepares students for **professional examinations to Associateship level**
 - **UK** – Institute and Faculty of Actuaries
 - **North America** – Casualty Actuarial Society and Society of Actuaries
- **Accredited by professional body**, where graduates will be exempted from various professional examinations (subject to re-accreditation)
 - **UK** – Institute and Faculty of Actuaries
- **Validated by Educational Experience (VEE)**
 - **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 in Hong Kong accredited by Institute and Faculty of Actuaries
- **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:** Abundant career opportunities in Hong Kong and mainland China. Graduates develop their careers in major insurance and reinsurance companies, actuarial consulting firms and investment banks

BSc(ActuarSc) Curriculum Structure (240 credits)

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



6224

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

Impacts the world with the limitless power of AI



Unique Features

- **Interdisciplinary programmes for elite students:** Provides formal academic training to elite students who wish to join the AI profession
- **Featured concentrations:**

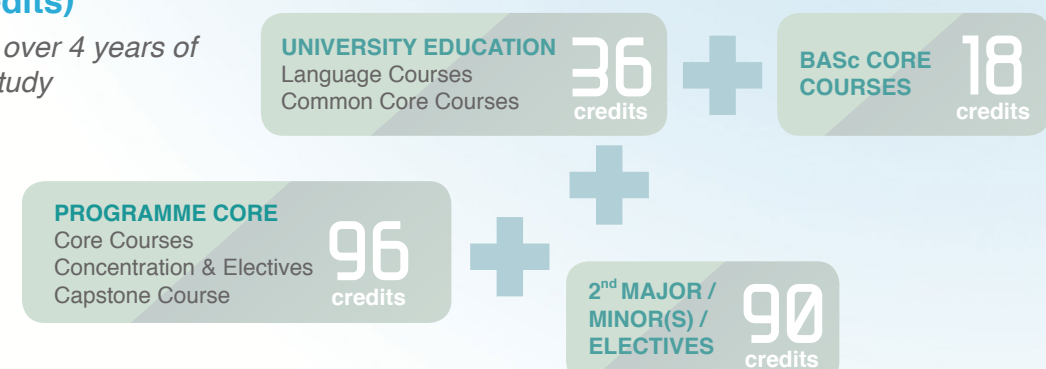
AI

- Technology
- Business and finance
- Smart city
- Medicine
- Neurocognitive science

- **Career prospects 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 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



**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

6212

Bachelor of Arts & Sciences (BASc)

Nurtures future global leaders to make changes in interconnected world

The 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
 - Social intelligence
 - Creative problem-solving
 - Analytical skills
 - Communication skills
 - Ethical responsibility
 - 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:
 - Cultures/ Societies and
 - 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
 - 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

UNIVERSITY EDUCATION
Language Courses
Common Core Courses

36
credits

BASc CORE COURSES

18
credits

PROGRAMME CORE

- Interdisciplinary curriculum
 - Qualitative and Quantitative Research Methods in Interdisciplinary Studies
 - Interdisciplinary Capstone Course
 - Courses from Two Pathways: (a) Cultures/ Societies (b) Physical World/ Biological/ Human Sciences
- Internship

96
credits

ELECTIVES

90
credits

6119

Bachelor of Education & 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

UNIVERSITY EDUCATION
Language Courses
Common Core Courses

42
credits

SCIENCE MAJOR

96
credits

PROFESSIONAL CORE SCIENCE EDUCATION (including Professional Practicum)

120
credits

ELECTIVES

42
credits



Celine KOSASIH

BSc alumna (major in Food & Nutritional Science)

"The Food and Nutritional Science Major allowed me to gain both in-depth knowledge and hands-on experiences through numerous laboratory sessions to apply the concepts learnt in lectures. The food marketing internship that I undertook as a capstone requirement in my final year also exposed me to a possible career path. The highlight of the programme, though, was that it filled with passionate professors who were always ready to answer my questions whether they were about studies or career related. Overall, this Major definitely prepped me for my future endeavours within the food industry."

Daisy LEUNG

BSc alumna (major in Chemistry)

"As a Chemistry student at HKU, I was exposed to a myriad of opportunities, including both internal and external internships. The curriculum was comprehensive and flexible that enabled students to develop an independent and logical mindset, acquire meticulous analytical skills, and allowed students to choose their own interest in specific chemistry areas."



Chemistry

Michael TANG

BSc alumnus (major in Physics, minor in German)
Participant of Undergraduate Overseas/ Mainland Experiential Learning Activities at RIKEN in summer, 2018

"The Physics Major allowed us to explore our interests with flexible course choices and common core courses, and placed a great emphasis on expanding and developing our toolset – from problem-solving skills to computational techniques in modern research projects. Thanks to various career opportunities provided by HKU, I was able to embark on a fruitful career in information technology, where the skills that I had accumulated over these four years had proven time after time to be unexpectedly useful."



Physics

Yaochen WU

BSc alumnus (major in Mathematics and minor in Physics)
Participant of Summer Research Fellowship Scheme in Department of Mathematics, 2017

"For me, mathematics is a beautiful language which reveals subtle things in its own way. I received much instruction and help from different members of the Department of Mathematics, in particular during the research projects or seminars. Teachers were always patient and encouraging, yet they were also serious and set challenging goals for me. If you appreciate the beauty of mathematics, you will certainly wish to join this Major where you can find plenty of opportunities and great instructors."



Mathematics

X+Y

Hear

from our Students



Statistics

Feiqing HUANG

BSc alumna (major in Statistics)

"Department of Statistics and Actuarial Science provided me with a diversity of opportunities that satisfied my cravings for inspiration and all-round development. There were Overseas Research Fellowship scheme and Career Advising Programme (CAP) tailor-made for statistics and actuarial science students. The accessibility to abundant opportunities was what I was truly grateful for, as it prepared me to embrace the challenge when the time arrives."



Raina XIN

BASc(AppliedAI) student
Recipient of Future Leaders of the Year Scholarships (HKU)

"This Applied AI programme helps you find your own passion in AI, with various concentrations in year 3 that you could choose from, and interdisciplinary and all-round training. I am interested in applying AI to medicine and conducting research about building an AI classifier to perform cardiovascular disease early screening. Leading researchers share their insights in the lectures and spared their time for further discussion after class."

There are also plenty of internship and research opportunities available to help us gain more experience."



Cameron Xavier VAN BREDA

BSc student (major in Molecular Biology and Biotechnology, minor in Science Entrepreneurship)
Co-founder & CEO of Hollo
2020 Microsoft Imagine Cup World Champion

"The Minor in Science Entrepreneurship was truly insightful to share ideas and get feedback from teachers and other students that were thinking about innovation from different disciplines. The programme encouraged and facilitated a lot for us to establish our own start-ups, putting into the eyes of industry players using the university's platform to reach out and connect. Teachers also had driven and grounded the innovation and business potential of students' start-ups."



Career Prospects

HKU ranks **#9** in QS World Graduate Employability Rankings 2020

Major occupation of HKU Science graduates



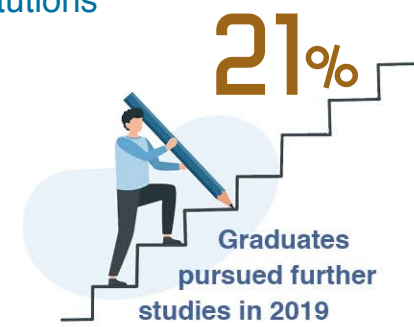
- 61% Commerce and Industry
- 17% Community, Social & Personal Services
- 17% Educational Institutions
- 5% Civil Service

Some of our graduates' first employers



Our students pursue further studies in a broad range of science and non-science disciplines at renowned institutions

Business, Computing, Economics, Engineering, Materials Sciences, Medical Sciences, Pharmacology



JUPAS Applicants

Minimum programme entrance requirements:

EN
English Language

Chinese Language

Mathematics

Liberal Studies

Elective Subjects: Category A subjects and Extended Module 1 or 2 in Mathematics (M1/M2)

6688 BSc&MRes	Level 5*	Level 3	Level 4	Level 2	Level 4 in M1/M2 Level 3 in 2 Science subjects [#]
6858 BSc&LLB	Level 5	Level 4	Level 2	Level 2	Level 3 in 2 subjects [^]
6901 BSc & 6119 BEd&BSc	Level 3	Level 3	Level 2	Level 2	Level 3 in 2 subjects [^]
6729 BSc(ActuarSc)	Level 3	Level 3	Level 4	Level 2	Level 4 in M1/M2 Level 3 in 1 subject
6224 BASc(AppliedAI)	Level 4 [◇]	Level 3	Level 4	Level 2	Level 4 in M1/M2 Level 3 in 1 subject
6212 BASc	Level 5 ⁺	Level 3	Level 2	Level 2	Level 3 in 2 subjects [▲]

Remarks: * Candidates with level 4 in English Language but with excellent results in Science subjects/ Mathematics will be exceptionally considered on a case-by-case basis

Science subject: Biology, Chemistry, Physics, or Combined Science

^ One of the elective subjects must be a Science subject: Biology, Chemistry, Physics, Combined Science, or Integrated Science

◇ Candidates with level 4 in English Language, if admitted, will be required to take 6 additional credits in Core University English to complete their degree studies

+ 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

▲ Level 3 or above in M1/M2 is preferred (but not required)



NON-JUPAS Applicants

Students holding non-HKDSE qualifications are considered individually

Useful Information

HKU Undergraduate Admissions

<https://www.aal.hku.hk/admissions>



Contacts for Further Information



**BSc, BSc&MRes, BSc&LLB,
BSc(ActuarSc) & BASc(AppliedAI):**
Faculty of Science

www.scifac.hku.hk/prospective/ug

3917-2683 sci.ug.admission@hku.hk



BEd&BSc: Faculty of Education

web.edu.hku.hk/programme/bedbsc_6119

3917-4659 bedbsc@hku.hk



BASc: Faculty of Social Sciences

www.socsc.hku.hk/basc/

3917-1207 socscug@hku.hk

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THE UNIVERSITY OF HONG KONG
香港大學理學院



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