6901 BSc Programme & Young Scientist Scheme (YSS)

6901 Bachelor of Science

Science is Brewing

Intensive Majors
Accreditations
Minor in Science Entrepreneurship
Articulation Pathways
Why HKU Science?
Teaching Departments

- School of Biological Sciences
- Department of Chemistry
- Department of Earth Sciences
- Department of Mathematics
- Department of Physics
- Department of Statistics and Actuarial Science
Glorious Years
of
Home
to Science

Nurturing young intellectual minds into global leaders
High University Rankings

Top-ranked Scientists

(Clarivate Analytics’ Essential Science Indicators 2018)

16% of professoriate staff are the world’s top 1% scholars
International Environment

About 40% academic staff are from overseas

International collaborations

The Most International University in the World

#1
Global Experience

Committed to nurturing students as global citizens

Targeting at 100% overseas experiences by 2022

Examples of overseas experiences
• Worldwide exchange studies
• Overseas Research Fellowships
• Field trips
• Summer courses
• International scientific conferences
• Internships
A Glance of Undergraduate Programmes in the Faculty of Science

- **6901** Bachelor of Science
- **6729** Bachelor of Science in Actuarial Science
- **NEW 6224** Bachelor of Arts and Sciences (Applied All)
- **6119** Bachelor of Education and Bachelor of Science (5-year Double Degree)
- **NEW 6212** Bachelor of Arts and Sciences
The 6901 BSc Programme

Empowers scientific intellectuals to formulate solutions to society's challenges
Simple and Flexible

• One entry in application for a choice of 14 Majors and 4 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
6901 Bachelor of Science Programme

Comprehensive training in science

- Develops capabilities in quantitative and logical reasoning
- Cultivates ability to tackle novel situations and solve complex problems

A choice of 14 Science Majors to suit your interests and career aspirations

- Biochemistry
- Biological Sciences
- Chemistry
- Decision Analytics
- Earth System Science
- Ecology and Biodiversity
- Environmental Science
- Food & Nutritional Science
- Geology
- Mathematics
- Molecular Biology & Biotechnology
- Physics
- Risk Management
- Statistics

4 Intensive Majors in addition to the 14 regular Majors for students to choose

~~ More information will be provided below! ~~
Forty 6-credit courses spanning over 4 years of full-time study

(240 Credits)

UNIVERSITY EDUCATION
Language Courses
Common Core Courses
(54 credits)

PRIMARY SCIENCE MAJOR
Science Foundation Courses
Disciplinary Courses
Capstone Course
(96 credits)

2nd MAJOR / MINOR(S) / ELECTIVES
(90 credits)
DIVERSE LEARNING EXPERIENCES
International Exchange Studies

Around **300 partner universities** in more than **40 countries**, including:

**North America**
- University of California
- University of Chicago
- Columbia University
- Johns Hopkins University
- Stanford University

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

**Undergraduate Research Experiences**

Ample undergraduate research opportunities are offered by the Faculty

- **Overseas Research Fellowship (ORF)**
  - Examples:
    - North America
      - California Institute of Technology
      - Columbia University
      - Cornell University
      - MIT
      - Stanford University
      - University of California
    - Europe
      - CERN
      - University of Cambridge
      - University College London

- **Summer Research Fellowship (SRF)**
- **Undergraduate Research Colloquium**
- **Final-year projects**
- **Directed studies**

284 BSc students travelled abroad for international exchange in 2017-18
Field Trips

Provide students with hands-on learning experience outside classroom

Examples of field trip destinations:

• Australia
• Canada
• Kenya
• Taiwan
• Thailand
• USA

Internships

• Enable students to apply knowledge in the workplace
• Prepare students for their careers

More than 126 internship opportunities were offered in 2017-18
New Initiatives in 6901 BSc
NEW INITIATIVES
in 6901 BSc programme

1. Specialisation and intensive training make experts
   - Chemistry (Intensive)
   - Ecology & Biodiversity (Intensive)
   - Geology (Intensive)
   - Molecular Biology & Biotechnology (Intensive)

2. Quality assured through recognition by international professional bodies
   ▪ Royal Society of Biology Accredited Degree
   ▪ Royal Society of Chemistry Accredited Degree
   ▪ The Geological Society Accredited programme

Intensive Majors
NEW INITIATIVES
in 6901 BSc programme

3 Opening the doors to entrepreneurship
visualises how training in science bears relevance to the real world

4 Seamless articulation to widely recognised postgraduate programmes in HK and overseas

Articulation Pathways

Minor in Science Entrepreneurship
Specialisation and intensive training make experts
Specialisation and intensive training make experts

The Faculty has adapted 4 Majors which were accredited by UK professional bodies into 4 NEW Intensive Majors, alongside with the regular 96-credit Majors.

4 NEW Intensive Majors

- Chemistry (Intensive) (144 credits)
- Ecology & Biodiversity Major (Intensive) (144 credits)
- Geology (Intensive) (150 credits)
- Molecular Biology & Biotechnology (Intensive) (144 credits)

More intensive majors will be offered subsequently.

Gain extensive subject knowledge
Fulfill the accreditation requirements of various royal societies in UK
Equip students who intend to pursue research in science
Enjoy an advantage at job application
A choice of **4 Intensive Majors** and **14 Science Majors** to suit your interests and career aspirations

**4 Intensive Majors**
- Chemistry (Intensive)
- Ecology & Biodiversity Major (Intensive)
- Geology (Intensive)
- Molecular Biology & Biotechnology (Intensive)

**14 Regular Majors**
- Biochemistry
- Biological Sciences
- Chemistry
- Decision Analytics
- Earth System Science
- Ecology and Biodiversity
- Environmental Science
- Food & Nutritional Science
- Geology
- Mathematics
- Molecular Biology & Biotechnology
- Physics
- Risk Management
- Statistics
Curriculum structure for BSc (Intensive Majors) Spanning over 4 years of full-time study (240 Credits)

- **UNIVERSITY EDUCATION**
  - Language Courses
  - Common Core Courses
  - (54 credits)

- **INTENSIVE SCIENCE MAJOR**
  - Science Foundation Courses
  - Disciplinary Courses
  - Capstone Course
  - (144 - 150 credits)

- **MINOR / ELECTIVES**
  - (36 - 42 credits)
Quality assured through recognition by international professional bodies
Quality assured through recognition by international professional bodies

Royal Society of Biology, UK

- Ecology & Biodiversity Major (Intensive)
- Molecular Biology & Biotechnology Major (Intensive)
  - gain additional recognition for skills and experience
  - learn the latest development in life sciences

Royal Society of Chemistry (RSC), UK

- Chemistry Major (Intensive)
  - final year students are qualified to apply for RSC membership
  - an authorised certificate to recognise students’ achievements

The Geological Society, UK

- Geology Major (Intensive)
  - The qualification is recognised internationally and in HK
  - an accelerated route to achieve the professional qualification
Minor in Science Entrepreneurship

Opening the doors to entrepreneurship
Opening the doors to entrepreneurship

Highlights of the Minor:

Strong emphasis on practical experience:
- Internship
- Capstone project

Mentoring offered by entrepreneurs or senior staff in industry/business

Co-taught by other Faculties such as Faculty of Business and Economics

New courses tailor-made for this Minor

Connecting academic knowledge with the real world

Bringing huge insights via critical analysis of enterprises

Broadening students’ horizon in entrepreneurship
Seamless articulation to widely recognised postgraduate programmes in HK and overseas
To Doctor of Veterinary Medicine (DVM) at University of Melbourne (UoMelb)

- Selected students, upon successful completion of a minimum of 6 semesters and gaining 186 credits under BSc 6901 programme, could enroll in DVM at UoMelb.

- Graduates will be conferred 2 degrees from the 2 universities – the HKU BSc degree and the DVM in UoMelb in no less than 7 years.

New articulation pathway for pursuing a career in veterinary medicine:

Bachelor of Science at HKU

1. BSc I
2. BSc II
3. BSc III
4. (Optional) BSc IV (1st sem)

DVM1

credit transfer to HKU BSc

DVM (UoMelb)

- DVM2
- DVM3
- DVM4

DVM degree at the University of Melbourne (UoMelb)

HKU 6901 BSc degree

A minimum of 7 years
To Doctor of Veterinary Medicine (DVM) at University of Melbourne (UoMelb)

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

Prerequisite for application
- Gain 186 credits upon successful completion of a minimum of 6 semesters
- Selected students should achieve a minimum cumulative GPA of 3.45 at the last regular semester at HKU

Quota
- A maximum of 5 places annually

Scholarship
- To partially cover the tuition fees in the first year of study at UoMelb

About DVM at UoMelb
- QS World University Rankings 2019 by Subject – Veterinary Science #17

Graduates will be able to
- register as a veterinary surgeon and practise in HK
- practise as a veterinarian in many countries such as Australia, UK and North America

Accredited by:
- AVBC (Australia)
- AVMA (USA)
- RCVS (UK)
TPg Programmes include:
- MSc in the Field of Food Safety and Toxicology
- MSc in the Field of Applied Geosciences
- MSc in Environmental Management
- Master of Statistics
- MSc in the Field of Food Industry: Management and Marketing
- MSc in Data Science

Eligibility:
With a CGPA of 3.5 at graduation and fulfillment of the respective admissions requirements
To the Master of Science in Biotechnology at Northeastern University

HKU Science graduates with a GPA of 3.2 or above are eligible for direct admission to the programme.

1st year
May complete the course work online.

2nd year
Transfer to Northeastern University to complete the remaining studies.
Young Scientist Scheme (YSS)
Early Research Experiences for Outstanding Science Students
YSS — Early Research Experiences for Outstanding Students

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. Enrollment in the Frontiers of Science Honours Seminar
7. Stipends for research activities
8. Entrance scholarship
Pathway of YSS

YEAR 1
- Guidance from Research Mentor
- Summer Research Fellowship

YEAR 2
- 2nd Summer Research Fellowship or Overseas Research Fellowship

YEAR 3
- International Exchange Study, Visiting or Summer Study

YEAR 4
- Final Year Project
- International Conference
- Frontiers of Science Honours Seminar
YSS participants are guaranteed to go on exchange, visiting or summer study in a top university

Examples

- Yale University
- Columbia University
- Imperial College London
- King's College London
- University of Chicago
- Johns Hopkins University
- Berkeley University of California
- Stanford University
- University of Cambridge
How to join YSS?

JUPAS

Total score of Best 5 HKDSE Category A subjects* ≥ 35 scores
• automatically accepted to YSS
• no interview is necessary

In 2018, 33 students were admitted to YSS

Non-JUPAS

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

HKU’s HKDSE ‘level to score’ conversion introduced in 2019

<table>
<thead>
<tr>
<th>Admission Year</th>
<th>HKDSE Level</th>
<th>1</th>
<th>2</th>
<th>3</th>
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<th>5*</th>
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6901 BSc students not admitted to YSS on entry still:
• have a second chance to enroll in YSS at a later stage
• could still compete for SRF, ORF and/or international exchange during their study

* Including Category A subjects / M1 / M2
Broad Further Study Options

On top of pursuing further study in science disciplines, our graduates also pursue further studies in other disciplines.

- business
- computing
- economics
- engineering
- materials sciences
- medical sciences
- pharmacology

Some of the institutions our students went for further studies:

- Cambridge
- McGill
- SLAC
- Caltech
- Michigan
- Stanford
- Chicago
- MIT
- Texas
- Columbia
- Oxford
- UCLA
- Harvard
- Princeton
- UC
- Illinois
- SBU
- UC San Diego
Wide Career Prospects

- Many of our graduates are holding positions that demand scientific expertise
- They are also preferred by employers because of their numerical analytical skills and logical thinking

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

- Finance
- Management
- Civil Services
- Geotechnical Industries
- Biotech & Pharmaceutical Industries
- Computer Industries
- Labs
- Engineering
- Food Industries
- Green and Environmental Industries
- R&D Scientist; Education; Technical Marketing; etc.

and more
University Entrance Requirement (for JUPAS applicants)

Elective subjects can be any Category A subject, one of them must be a Science subject.

6901 BSc

- Mathematics Level 2
- Liberal Studies Level 2
- Chinese Language Level 3
- English Language Level 3
- Elective subject* Level 3
- Elective subject* Level 3

2019 Admission Quota

336
(JUPAS + Local Non-JUPAS)
(Separate quota for non-local students)

* Elective subjects can be any Category A subject, one of them must be a Science subject
Admissions Formula for 6901 BSc (For JUPAS applicants)

Selection principle: **BEST 5**

**JUPAS**
- English
- Mathematics
- Best Science Elective

**DSE Subjects**
- Science elective subjects (Biology, Chemistry, Physics, Combined Science or Integrated Science)
- Mathematics
- Extended module 1 or 2 in Mathematics

**Weighting**
- English language: \( \times 1.5 \)
- Mathematics: \( \times 2 \)
- Best Science Elective: \( \times 1.5 \)
- The BEST 2 of remaining Category A subjects/M1/ M2

**Non-JUPAS**
Students holding non HKDSE qualifications are considered on individual basis
2018 JUPAS Admissions Scores

Total score (without weighting) of best 5 HKDSE subjects among the 6901 intakes

22 ~ 35
Science Entrance Scholarships for 6901 BSc Students

HKDSE Results
Total score in the best 5 subjects (including M1 or M2)

- Score ≥ 42.5: $70,000
- Score ≥ 41: $60,000
- Score ≥ 39: $50,000
- Score ≥ 37: $40,000
- Score ≥ 35: $20,000

Note: The results are based on one sitting only. Students must NOT BE HKDSE REPEATERS and must fulfill the minimum University entrance requirements.

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