New Initiatives in 6901 BSc Programme & Young Scientist Scheme

2019 - 2020

6901 Bachelor of Science

Intensive Majors

Accreditations

Minor in Science Entrepreneurship

Articulation Pathways

Science is Brewing
Why HKU Science?
Among the universities in Hong Kong, High University Rankings are as follows:

- QS World University Rankings 2019: #1 among the Universities in Hong Kong
- Times Higher Education World University Rankings 2019: #25 In the world, #1 among the Universities in Hong Kong
- QS Asian University Rankings 2019: #2 among the Universities in Asia, #36 In the world

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

The International Student Rank 2018
by THE World University Rankings

**#22** in the world

**#1** in Asia

International collaborations
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
A glance of undergraduate programmes in the Faculty of Science

6901 Bachelor of Science

6729 Bachelor of Science in Actuarial Science

6199 Bachelor of Education and Bachelor of Science (5-year Double Degree)

NEW 6212 Bachelor of Arts and Sciences

NEW 6224 Bachelor of Arts and Sciences (Applied All)

SCIENCE IS BREWING
The 6901 BSc Programme

Empowers scientific intellectuals to formulate solutions to society's challenges
6901 Bachelor of Science Programme

Key Features of Our BSc Curriculum

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

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
New Initiatives in 6901 BSc
Specialisation and intensive training make experts
The Faculty has adapted four Majors, which were accredited by UK professional bodies, into 4 NEW Intensive Majors, alongside with the regular 96-credit Majors.

### 4 NEW Intensive Majors in addition to 14 Science 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.*

### Regular 96-credit Majors

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

- Gain extensive subject knowledge
- Offered alongside with the regular 96-credit Majors
- 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
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

Ecology & Biodiversity Major (Intensive) and Molecular Biology & Biotechnology Major (Intensive) have been conferred the accreditation from Royal Society of Biology, UK

- gain additional recognition for skills and experience
- learn the latest development in life sciences

Chemistry Major (Intensive) have been conferred the accreditation from Royal Society of Chemistry (RSC), UK

- final year students are qualified to apply for RSC membership
- an authorised certificate to recognise students’ achievements

Geology (Intensive) Students completing specified geology courses will receive an accredited degree from The Geological Society, UK

- The qualification is recognised internationally and in HK
- an accelerated route to achieve the professional qualification
Opening the doors to entrepreneurship

Minor in Science 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 and related courses offered by other Faculties**

- 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
Seamless articulation to widely recognised postgraduate programmes

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.
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

Quota
A maximum of 5 places annually

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

About DVM at UoMelb
QS World University Rankings 2018 by Subject – Veterinary Science #15

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
Seamless articulation to widely recognised postgraduate programmes

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
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

Quality assured through recognition by international professional bodies:
- Royal Society of Biology
- Royal Society of Chemistry
- The Geological Society
NEW INITIATIVES in 6901 BSc programme

3 Opening the doors to entrepreneurship

visualises how training in science bears relevance to the real world

Minor in Science Entrepreneurship

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

Articulation Pathways
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
Frontiers of Science Honours Seminar

YEAR 3
International Exchange Study, Visiting or Summer Study
Honours Seminar

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

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

**JUPAS**

- Best 5 HKDSE Category A subjects *≥ 31 scores*
  - automatically accepted to YSS
  - no interview is necessary

**Non-JUPAS**

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

In 2018, **33 students** were admitted to YSS

6901 BSc students not admitted to YSS on entry still:
- have a second chance to enroll in YSS
- could compete for SRF, ORF and/or international exchange during their study

* Including Category A subjects / M1 / M2
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

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

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

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

Examples:
- **Europe**
  - CERN
  - University of Cambridge
  - University College London
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
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 San Diego
- Illinois
- SBU
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

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

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

Mathematics
Level 2

Liberal Studies
Level 2

Elective subject
Level 3

Chinese Language
Level 3

Elective subject
Level 3

English Language
Level 3

6901 BSc

2019 Admission Quota
336#
(JUPAS + Local Non-JUPAS)
(Separate quota for mainland and international students)

* Subject to confirmation

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

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: $\times 2$

**Non-JUPAS**

Students holding non HKDSE qualifications are considered individually.
**2018 JUPAS Admissions Scores**

Total score of best 5 HKDSE subjects among the 6901 intakes

### 6901 BSc

**22 ~ 35**

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The HKDSE ‘level to score’ conversion

<table>
<thead>
<tr>
<th>Admission Year</th>
<th>HKDSE Level</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>5*</th>
<th>5**</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>Conversion under the existing system</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>2019</td>
<td>Conversion under the New Bonus Points system</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5.5</td>
<td>7</td>
<td>8.5</td>
</tr>
</tbody>
</table>
2018 Non-JUPAS Admissions Scores

6901 BSc

GCEAL

- Lowest admission score: 1A*, 2A
- Average admission score: 2A*, 1A

IB

- Lowest admission score: 34
- Average admission score: 38

- We accept students with other qualifications such as AD, HD, SAT.
- We also accept applications from students who have completed 1st year of AD/HD programme or degree programme from other universities.
Science Entrance Scholarships
for 6901 BSc Students

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

<table>
<thead>
<tr>
<th>Score</th>
<th>Scholarship</th>
</tr>
</thead>
<tbody>
<tr>
<td>35</td>
<td>$70,000</td>
</tr>
<tr>
<td>34</td>
<td>$60,000</td>
</tr>
<tr>
<td>33</td>
<td>$50,000</td>
</tr>
<tr>
<td>32</td>
<td>$40,000</td>
</tr>
<tr>
<td>31</td>
<td>$30,000</td>
</tr>
</tbody>
</table>

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

The HKDSE ‘level to score’ conversion (not including bonus point):

<table>
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<tr>
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<td>6</td>
<td>7</td>
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