HKU Faculty of Science introducing new initiatives in curricula enhancement
Equipping outstanding undergraduate students for versatile developments

港大理學院優化課程展新猷
加強本科生培育 銜接就業出路及發展

2019
2020

Faculty of Science
The University of Hong Kong
NEW INITIATIVES
For Science curricula

1. Specialisation and intensive training make experts
   認證精研主修課程深度培訓專才
   - Chemistry (Intensive)
   - Ecology & Biodiversity (Intensive)
   - Geology (Intensive)
   - Molecular Biology & Biotechnology (Intensive)

2. Quality assured through recognition by international professional bodies

Accreditations
NEW INITIATIVES

For Science curricula
港大理學院優化課程展新猷

3. Opening the doors to entrepreneurship
科學創業副修
助認識企業運作

visualises how training in science bears relevance to the real world

4. Seamless articulation to widely recognised postgraduate programmes in HK and overseas
無縫銜接廣受認可的研究生課程

5. Opening up new perspectives
跨學科文理學士課程
開創新視野

6224 Bachelor of Arts and Sciences (Applied AI)
文理學士（應用人工智能）

6212 Bachelor of Arts and Sciences
文理學士
Specialisation and intensive training make experts.
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.

港大理學院將4科得到英國專業團體認證的主修科目納入為精研主修課程，和一般96個學分的主修科目並行。

**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
  獲得廣泛的學科知識
- Offered alongside with the regular 96-credit Majors
  和一般96個學分的主修科並行
- Fulfill the accreditation requirements of various royal societies in UK
  精研主修課程得到英國專業團體的認證
- Equip students who intend to pursue research in science
  為有志從事科研的本科生打好基礎
- Enjoy an advantage at job application
  精研主修課程畢業生從事相關行業可享優勢
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)
Accreditations

Quality assured through recognition by international professional bodies

國際專業團體認證 確保課程質素
Quality assured through recognition by international professional bodies

- **Ecology & Biodiversity Major (Intensive)**
  - 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

科学創業副修助認識企業運作
Opening the doors to entrepreneurship

Aims at broadening the horizon of students with respect of entrepreneurship, offering them more competitive edge via connecting their academic knowledge with the real world.

Broadening students’ horizon in entrepreneurship

Connecting academic knowledge with the real world

Bringing huge insights via critical analysis of enterprises

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

Opening the doors to entrepreneurship

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

亦會涉獵其他學院相關的科目令課程覆蓋更為完善

New courses tailor-made for this Minor and related courses offered by other Faculties

設有多個為課程度身定做的新科目

Opening the doors to entrepreneurship

Aims at broadening the horizon of students with respect of entrepreneurship, offering them more competitive edge via connecting their academic knowledge with the real world.

透過讓學生認識創業而擴闊視野，讓他們結合知識和現實世界的連繫

Strong emphasis on practical experience:
- Internship
- Capstone project

Mentoring offered by entrepreneurs or senior staff in industry/business

會邀請校友和其他於工商界別的企業家擔任人生導師

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

亦會涉獵其他學院相關的科目令課程覆蓋更為完善

New courses tailor-made for this Minor and related courses offered by other Faculties

設有多個為課程度身定做的新科目
Seamless articulation to widely recognised postgraduate programmes in HK and overseas
To Doctor of Veterinary Medicine (DVM) at University of Melbourne (UoMelb)
銜接澳洲墨爾本大學獸醫學博士計劃

- Selected students, upon successful completion of a minimum of 6 semesters and gaining 186 credits under BSc 6901 programme, can enroll in DVM at UoMelb.
獲選的6901理學士學生在港大完成最少6個學期及修畢186學分後，可透過銜接計劃到墨爾本大學修讀首年獸醫學博士課程

- 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.
參與計劃的學生須用不少於7年時間完成課程，畢業生可獲頒兩個學位，分別是港大理學士及墨爾本大學獸醫學博士

Seamless articulation to widely recognised postgraduate programmes
New articulation pathway for pursuing a career in veterinary

HKU 6901 BSc
Bachelor of Science at HKU

HKU 6901 BSc degree
A minimum of 7 years

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

DVM1
credit transfer to HKU BSc

DVM2
DVM3
DVM4
DVM degree at the University of Melbourne (UoMelb)
To Doctor of Veterinary Medicine (DVM) at University of Melbourne (UoMelb)

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

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

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

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 without further training

Accredited by:
- AVBC (Australia)
- AVMA (USA)
- RCVS (UK)
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
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
New interdisciplinary Bachelor of Arts and Sciences Programmes – Opening up new perspectives

跨學科文理學士課程開創新視野
Unique Features

An intrinsically integrated programme co-offered by Faculties of Science, Social Sciences, Arts

For ambitious students who aspire to become leaders across a diverse range of fields

Equips students with social intelligence, creative problem-solving, analytical skills, communication skills, ethical responsibility and interdisciplinary perspective in understanding our world.
Curriculum Structure
Forty 6-credit course spanning over 4 years of full-time study
(240 Credits)

UNIVERSITY EDUCATION
Language Courses
Common Core Courses
(36 credits)

BASc COMMON COURSES
Horizontals
(18 credits)

INTERDISCIPLINARY CURRICULUM
Interdisciplinary Courses
Pathways
1. Cultures / Societies
2. Physical World / Biological / Human Sciences
Interdisciplinary Capstone Course
(96 credits)

INTERNERSHIP
(12 credits)

ELECTIVES
(78 credits)
Admissions Requirements

JUPAS Applicants

6212 BASc

Mathematics
Level 2

Liberal Studies
Level 2

Chinese Language
Level 3

English Language #
Level 5 (or equivalent)

Elective subject
Level 3

Elective subject
Level 3

2019 Admission Quota
24*
(JUPAS + Local Non-JUPAS)
(Separate quota for mainland and international students)

* Subject to confirmation

# Candidates with level 4 in English Language and good results in other HKDSE subjects will be considered on a case by case basis.
In this digital era, the limitless power of AI shows its impact on all aspects of life.

置身數碼年代，人工智能和我們的生活息息相關，其發展亦潛藏著無限可能。

The Policy Address 2018 highlights:
- Smart City
- Financial Technologies

- Smart city development: new information and communications technology infrastructure is an indispensable;
- Reforming its cloud infrastructure by 2020
- Developing a platform operating big data analytics and AI application to enhance e-Government services;
- Earmarking HK$10 billion to support the establishment of two research clusters, one on healthcare technologies and one on AI and robotics technologies.

2018年《施政報告》指出，政府將會：
- 預留一百億元支持建設醫療科技創新平台和人工智能及機械人科技創新平台
- 吸引世界頂尖的科研機構和科技企業來港
- 與本地大學及科研機構合作進行更多中下游研發項目，為香港匯聚及培育更多優秀的科技人才
The new 6224 BSc (Applied Artificial Intelligence) Programme

- Nurture globally-minded thinkers and leaders
  培育具國際及宏觀視野的領袖

- Help students
  - develop interdisciplinary mindset and learning approach
  - acquire transdisciplinary knowledge and skills
  幫助學生發展跨學科的思維方式和學習方法，獲得跨學科的知識和技能

- highlights AI applications in diverse areas
  培育學生設計和建造不同領域所需的智能系統

- develops students’ intellectual capacity to meeting new challenges
  讓學生能在不同行業大放異彩，成為人工智能專才

- emphasises problem-based learning
  課程以問題導向學習為本
Bachelor of Arts and Sciences in Applied Artificial Intelligence BASc(Applied AI)

Impacts the world with the limitless power of AI

Unique Features

New option for elite students
Formal training to elite students who wish to join the AI profession

Interdisciplinary training
Facilitates a coordinated approach to teaching and learning across different disciplinary fields in collaboration with other Faculties

Featured concentrations

- Technology
- Business and finance
- Medicine
- Smart city
- Neurocognitive science
Bachelor of Arts and Sciences in Applied Artificial Intelligence BASc(Applied AI)

Impacts the world with the limitless power of AI

Innovative Learning Model

- Each BASc programme involves more than two disciplines, much more transdisciplinary than usual double majors / major-minor learning models. 和一般雙主修或主修/副修學習模式不同，文理學士課程標榜跨學科學習，涵蓋多個領域

- A few courses taught by two teachers of different disciplines 部份學科由來自不同領域的老師共同教授

- Privileged exchange partnership with top overseas universities, e.g. Yale, UC Berkeley, UBC, LSE, UCL, etc. 與海外頂尖大學建立交流合作關係

- Privileged internship partnership with landmark companies 與大機構建立合作伙伴關係，安排學生到其實習

Collaborators

Microsoft, 英特爾人工智能學院(Intel AI Academy)、NVIDIA、富國銀行集團(Wells Fargo & Company), Shenzhen Suoxinda Data Technology Co. Ltd.
Bachelor of Arts and Sciences in Applied Artificial Intelligence BASc(Applied AI)

Impacts the world with the limitless power of AI

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

(240 Credits)

- UNIVERSITY EDUCATION
  Language Courses
  Common Core Courses
  (36 credits)

- BASc COMMON COURSES
  Horizontals
  (18 credits)

- PROGRAMME CORE
  Core Courses
  Concentration & Electives
  Capstone Course
  (96 credits)

- 2nd MAJOR / MINOR(S) / ELECTIVES
  (90 credits)
Bachelor of Arts and Sciences in Applied Artificial Intelligence BASc(Applied AI)

Impacts the world with the limitless power of AI

Career Prospects

The programme connects the exploding demand of the AI market in diverse areas, such as:

- Science & technology 科學及技術
- Environmental protection 環境保護
- Medical informatics 醫學信息
- Healthcare 醫療保健
- Business 商業
- Banking & finance 銀行及金融
- Urban development 城市發展
- Neurocognitive science 神經認知科學
Bachelor of Arts and Sciences in Applied Artificial Intelligence BASc(Applied AI) Impacts the world with the limitless power of AI

Hi-tech Companies

- SET SAIL SOFTWARE
- CLICKFUL
- SMART RETAIL
- Fund3
- Clare.AI
- ANI WEAR
- IMSIGHT
- FANOLabs
- LEXICA
- Emotics
- sense time

Fintech Startups

- QUANTIFEED
- ANX INTERNATIONAL
- MONEXO
- CompareAsia
- FinFabrik
- 8
- AIDYIA
- BitSpark
- TNG
- neat
- CONFIRCO
- AERIVACY
- LENDDO
- privo financial

27
JUPAS Applicants  Admissions Requirements

**6224 BASc (Applied AI)**

- **Mathematics**
  - Level 4
- **Chinese Language**
  - Level 3
- **Elective subject**
  - Level 3
- **Liberal Studies**
  - Level 2
- **English Language #**
  - Level 5
- **Extended module 1 or 2 in Mathematics**
  - Level 4

2019 Admission Quota 15 - 20

# Candidates with level 4 in English Language and good results in other HKDSE subjects will be considered on a case by case basis.
Admissions Formula for 6224 BASc(AppliedAI)

**JUPAS**

**DSE Subjects**
- English language
- Mathematics
- Extended module 1 or 2 in Mathematics
- Science subject (Biology, Chemistry, Physics, Combined Science or Integrated Science)
- Other Category A subjects

**Weighting**
- English: $\times 2$
- Mathematics: $\times 1.5$
- Other Category A subjects: $\times 1$

**Non-JUPAS**

**Expected lower boundary score**
- IB Diploma: 37
- GCE A-Level: 2A*, 1A
- SAT: 1350
THANK YOU
Supplementary Information
**JUPAS Applicants**

**Admissions Requirements**

**Selection principle:**
- **BEST 5**
  - English
  - Mathematics
  - Best Science Elective
  - The BEST TWO of other subjects / M1 / M2

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

**2019 Admission Quota**

336# (JUPAS + Local Non-JUPAS)

(Separate quota for mainland and international students)

# Subject to confirmation

Heavier weight for Science Electives, Math and M1/M2
Admissions Formula for 6901 BSc (For JUPAS)

DSE Subjects
- Science elective subjects (Biology, Chemistry, Physics, Combined Science or Integrated Science)
- Mathematics
- Extended module 1 or 2 in Mathematics
- English language
- Other Category A subjects

Weighting
- JUPAS
  - English
  - Mathematics
  - Best Science Elective
  - The BEST 2 of remaining Category A subjects/ M1/ M2

Weightings:
- Science elective subjects: \( \times 2 \)
- Mathematics: \( \times 1.5 \)
- Other Category A subjects: \( \times 1 \)
2018 JUPAS Admissions Scores

Total score of best 5 HKDSE subjects among the 6901 intakes

6901 BSc

22 ~ 35
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)

Score of 35 $70,000  
Score of 34 $60,000  
Score of 33 $50,000  
Score of 32 $40,000  
Score of 31 $30,000

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