Learn from the Best Minds
Be Inspired by our Science Masters

Incubating the next generation of scientists

New Double Degree Programme
Bachelor of Science & Master of Research

6688 SCIENCE MASTER CLASS
2021-22

Attaining 2 degrees in 4 Years

• Bachelor of Science
• Master of Research
Is the Programme for You

Why this Programme

We understand the learning pace and needs of highly able students might be different — they are quick learners who can usually accomplish more than expected, which a standard pedagogical routine might not be an ideal option for them.

Professor Matthew Evans
Dean of Science and Professor of Ecology

This elite programme:
- provides a fast-track of study for talented students: completing 2 degrees in 4 years
- 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 researchers from diverse backgrounds
- incubates the next generation of dynamic scientists who are able to translate scientific knowledge into practical applications with far- and wide-reaching impacts

World-class Rankings of HKU

- Times Higher Education (THE)
  - #2 Most international universities in the world 2020
  - #35 World University Rankings 2020
  - #4 Asia University Rankings 2020
- Quacquarelli Symonds (QS)
  - #25 World University Rankings 2020
  - #3 Asia University Rankings 2020

Eminent Subject Rankings

- QS World University Rankings by Subject 2020
  - #51 Biological Sciences
  - #42 Chemistry
  - #50 Earth & Marine Sciences
  - #51 Environmental Sciences
  - #51 Materials Science
  - #43 Mathematics
  - #51 Physics & Astronomy
  - #50 Statistics & Operational Research

Top-notch Scientists in the Faculty

Clarivate Analytics’ Essential Science Indicators 2019
15.4% of our professoriate staff are the world’s Top 1% Highly Cited Researchers

International Environment

About 40% academic staff in the Faculty are from overseas

What the Programme Covers

Fast-track for completing 2 degrees in 4 years

Attaining 2 DEGREES in 4 YEARS

Bachelor of Science + Master of Research

Remarks: Students in the programme have to maintain a high GPA in order to remain in this double degree programme or switch to the BSc/BSc programmes.

Learning from Science Masters

Grand Masters through special tutorials
Masters as academic advisers

Catering the needs of elite students

disciplinary-based intensive study for research-aspired students
ample opportunities available in our flagship Young Scientist Scheme (YSS) including:
- Summer Research Fellowship
- Overseas Research Fellowship
- Exchange Study
- Entrance Scholarship
- be included in the Cambridge-track*
  * only available to Majors in Natural Sciences disciplines
  candidates will then follow the track of submitting to Cambridge successfully

Research-oriented

Research postgraduate courses and research projects to enhance the students’ frontier scientific knowledge and research skills
Where this Programme will lead you to

Professional recognition
Some of the Intensive Majors fulfill the accreditation requirements of various societies in the UK

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 university overseas or in HKU
- Builds a consortium of young researchers for cross fertilisation of innovative ideas and facilitates possible multidisciplinary projects

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

Who should Join this Programme
Students who would like to:
- be future masters of science and study in the Faculty of Science
- take courses across different science disciplines
- go onto higher degrees either in HKU or elsewhere
- obtain a diversity of experience by learning from the Grand Masters of the Faculty of Science rather than simply focusing entirely on one discipline
- conduct research and are interested in doing so during both their undergraduate and master level studies
- complete 2 degrees in 4 years at an accelerated pace

BSc (240 credits)

MRes (63 credits)

Total no. of credits: 303

Programme Information

<table>
<thead>
<tr>
<th>BSc</th>
<th>MRes</th>
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<tbody>
<tr>
<td>Study load</td>
<td>240 credits</td>
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<tr>
<td>Tuition fees</td>
<td>HKD 42,000 per year (local) HKD 17,000 per year (non-local)</td>
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*Scholarships will be provided to cover at least 50% of the tuition fee of the MRes programme

What You will Learn

- University Education (44 credits)
- Biological Sciences (Intensive) (144 credits)
- Chemistry (144 credits)
- Ecology & Biodiversity (Intensive) (144 credits)
- Geology (56 credits)
- Mathematics (144 credits)
- Molecular Biology & Biotechnology (Intensive) (144 credits)
- Physics (144 credits)
- Research Ethics course (3 credits)
- Research project (42 credits)
- Research postgraduate courses (18 credits)

Career courses
- Elective Courses (42 - 44 credits)
- Special tutorials by Grand Masters exclusive for this programme
- All opportunities available in our flagship Young Scientist Scheme (YSS) including:
  - Entrance Scholarship
  - Cambridge -track
  - Summer Research Fellowship
  - Overseas Research Fellowship
  - International exchange studies

Research activities
- Research Ethics course (3 credits)
- Research project (42 credits)
- Research postgraduate courses (18 credits)

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

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Skills alone would not make one succeed. It is the attitude, visions and efforts that set one's direction. Learn from the wise and broaden your horizon.

We have renowned scientists including:

- Members of Chinese Academy of Sciences, Hong Kong Academy of Sciences, and Hong Kong Young awardees of International/National Awards/Prizes; and
- International Members of National Academy of Sciences USA and Foreign Member of Academia Europaea;
- awardees of International/National Awards/Prizes; and
- a number of highly cited scientists

Get to know our Grand Masters:

**Professor Chi Ming CHE**

Zhou Guangzhao Professor in Natural Sciences
Head and Chair Professor of Department of Chemistry

As an Elected Member of the Chinese Academy of Sciences, the first Hongkonger to receive a First-class Prize of the State Natural Science Award and recipient of numerous awards in international academic arena including Foreign Fellow of National Academy of Sciences, USA, Professor Che’s pioneering study on synthetic chemistry shapes the culture of local research community. Steering the direction of profound research like Laboratory for Synthetic Chemistry & Chemical Biology and State Key Laboratory of Synthetic Chemistry, his wisdom can definitely inspire one's heart.

**Professor Ngai Ming MOK**

Edmund and Peggy Tse Professor of Mathematics
Director of Institute of Mathematical Research
Chair Professor of Department of Mathematics

As a top-notch mathematician who has resolved many classic math problems, Professor Mok has been the leading figure and the brain of HKU Institute of Mathematical Research for years. Among his recent professional accolades, Member of the Chinese Academy of Sciences, State Natural Science Award, and Fellow of the Hong Kong Academy of Sciences are some of the representative ones. He appreciates the aesthetics of mathematics, which young intellectuals will find his “mathematics-as-life” attitude enlightening.

**Professor Michael NG**

Director of Research Division for Mathematical and Statistical Science
Chair Professor of Department of Mathematics

Professor Ng’s research interests lie in artificial intelligence, data science and scientific computing, which are crucial for shaping the future of human life. He is a recipient of the Feng Kang Prize of Scientific Computing. Setting his vision far and wide, he is the pilot for the development of research in Mathematical and Statistical Science in the Faculty. Nonetheless, Professor Ng is no ordinary scholar – he is among the inspiring ones who would share thoughts and experiences beyond academic knowledge.

**Professor Min SUN**

Professor of Department of Earth Sciences

Professor Sun is a forerunner in geochemistry who strives to utilise chemical and isotope data to solve intriguing scientific problems in earth sciences. His contributions earn him prestigious honours including the National Natural Science Award (First-class, co-winner) and State Natural Science Award (Second-class, co-winner). As the Hong Kong Director of the Joint Chemical Geodynamics Laboratory with Chinese Academy of Sciences, his experiences in fostering collaborations across territories are definitely inspiring. Professor Sun has also been named by Clarivate Analytics as “Highly Cited Researcher” for 6 years in a row.

**Professor Vivian Wing Wah YAM**

Philip Wilson Wong Professor in Chemistry and Energy
Chair Professor of Department of Chemistry

Not only can we learn from Professor YAM of her innovative and frontier research, her resilience and values also inspire us on how to stay focused and insist on quality and excellence. Despite the many recognitions she has received, such as State Natural Science Award, Elected Member of Chinese Academy of Sciences and Foreign Associate of the US National Academy of Sciences, etc., she remains committed in pursuing and passing on knowledge and does not let go of chances to inculcate values to the young ones.

**Professor Wang YAO**

Chair Professor of Department of Physics

Professor Yao is a condensed matter physicist. He has been named by Clarivate Analytics in the list of “Highly Cited Researchers” among the world’s eminent researchers in 2018 and 2019. His current research interest lies in 2D materials, and has played a decisive role in creating an important new research direction – valley optoelectronics, which aims to exploit valley, a quantum degree of freedom of electron, in future optoelectronic devices. He is an Elected Fellow of American Physical Society, and Founding Member of Hong Kong Young Academy of Sciences.

**Professor Guochun ZHAO**

Chair Professor of Department of Earth Sciences

Professor Zhao has a clear mind in the face of challenges on his research of metamorphic petrology, Precambrian geology and supercontinents. His perseverance makes him the holder of many prestigious honours – Member of Chinese Academy of Sciences, National Natural Science Award (First-class, co-winner), State Natural Science Award (Second-class, co-winner), and named by Clarivate Analytics as “Highly Cited Researcher” for 6 years in a row.

**Professor Alice Sze Tsai WONG**

Associate Dean of Science (Teaching & Learning)
Professor of School of Biological Sciences

Professor Wong is a knowledgeable biologist who leads a team of scientists studying cell adhesion and signal transduction in cancer. She is a recipient of the Croucher Foundation Senior Research Fellowship. While her work provides important insights into the nature of ovarian carcinogenesis and informs the best practices of identifying new targets in cancer diagnosis and therapy, her experiences at laboratory are equally inspiring.

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Chair Professor of Department of Physics

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Admissions Requirements & Applications

JUPAS Applicants
- Students in local secondary schools taking the Hong Kong Diploma of Secondary Education (HKDSE) should apply through JUPAS.
- Minimum requirements:

<table>
<thead>
<tr>
<th>EN</th>
<th>Chinese</th>
<th>Mathematics</th>
<th>Liberal Studies</th>
<th>Elective subjects</th>
<th>M1 / M2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 5†</td>
<td>Level 3</td>
<td>Level 4</td>
<td>Level 2</td>
<td>Level 3 (two science subjects)†</td>
<td>Level 4</td>
</tr>
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†Candidates with level 4 in English Language but excellent results in Science subjects. Mathematics will be exceptionally considered on a case-by-case basis.

Non-JUPAS Applicants
Non-JUPAS applicants will be considered on a case-by-case basis. Higher level Mathematics is required for IB students. For GCEAL students, Mathematics and Further Mathematics are required. Excellent results in Mathematics are required for students with other qualifications.

Quota: 15-20

Further Information
Programme link: bit.ly/3KfpRrM
Useful Information: www.aal.hku.hk/admissions

HKU Undergraduate Admissions