Bioinformatics

BSc(Bioinformatics)
BSc(Bioinformatics)

The Bioinformatics programme at HKUMed nurtures the next generation of global leaders in biomedical data science and digital healthcare technology, who are well equipped to excel in diverse career paths in the healthcare sector, public health services, innovative entrepreneurship, and research.
Programme Aims and Objectives

Bioinformatics cover a wide range of high impact biomedical big data applications, including genomics, precision medicine, single-cell analysis, multi-omic systems biology, digital health technology, mobile health, artificial intelligence (AI) analysis of medical imaging data, electronic health record analysis, and global health & epidemiology.

Programme Overview

The design of this BSc (Bioinformatics) curriculum recognises the wide spectrum of personal interest and diversity in career aspiration of a modern bioinformatics practitioner, ranging from biomedical researchers who are skilled at performing analysis with bioinformatics tools (bioinformatics users), to computational biologists who can perform large-scale data analyses to solve biological questions (bioinformatics scientists), to software developers who build innovative computational or statistical tools for biomedical applications (bioinformatics engineers).

Data science is now central to modern biomedical research and healthcare innovation. Our BSc in Bioinformatics programme provides essential training for future leaders in this cutting-edge discipline.
This programme is centred around a series of anchoring courses across the four-year curriculum. These anchoring courses enable vertical and horizontal integration of various courses from diverse disciplines across different year levels. The flexible design of the curriculum allows students to take a multitude of disciplinary elective courses in biomedical sciences, statistics, computer science, and biomedical engineering. The programme focuses on essential statistical data analysis skills, key algorithms for biomedical informatics, and fundamental concepts in modern genomic and health technology.

Students are required to complete 240 credits of courses in the four-year curriculum, of which 96 credits are major courses, 36 credits are Common Core courses, and 18 credits are Language Enhancement courses. The remaining 90 credits are for minors and electives.
Core Courses for Bioinformatics Major

The core courses are divided into anchoring, foundation, project and disciplinary elective courses.

**Anchoring Courses**

Three anchoring courses are the centre-piece of the programme. It is expected that one anchoring course is taken at each of Year 1, 2 and 3/4 of the programme. These courses adopt a case-based problem solving approach to support interdisciplinary integration of subject-specific content at each year level (horizontal integration), and provide a consistent backbone for the curriculum across different years levels (vertical integration). Students are required to complete the following anchoring courses:

- Introduction to Biomedical Data Science
- Artificial Intelligence in Medicine
- Big Data in Biomedical Informatics

**Foundation Courses**

These courses, mostly to be taken in Year 1 and 2 of the programme, focus on concepts and practical skills in fundamental topics in bioinformatics, such as biochemistry, mathematics, statistics, and computer programming. Students are required to complete the following foundation courses:

- Perspectives in Biochemistry
- Computer Programming
- University Mathematics II
- Multivariable Calculus and Linear Algebra
- Probability and Statistics I
- Probability and Statistics II

**Project: Capstone Experience**

Each student is required to carry out an in-depth year-long research project in a specialised field of bioinformatics under the guidance of a supervisor who will provide continuous assessment on the student’s performance.
Disciplinary ‘Data Science Laboratory’ Courses

Taking an experiential learning approach, two innovative ‘Data Science Laboratory’ courses are offered to allow students to acquire hands-on computer programming and data analysis skills, and reinforce the underlying principles of mathematical, statistical, and algorithmic concepts through tailored dry-lab practical classes in genomics and digital health.

Students are required to complete one or both of the following courses:

• Genome Sequencing and Analysis
• Digital Health

Disciplinary Elective Courses

A wide range of specialised courses in bioinformatics, biomedical sciences, statistics and computer science can be chosen to fulfil the disciplinary elective courses. Students are required to take three to four courses from over 20 courses. Some example bioinformatics courses include:

• Structural Bioinformatics
• Biomedical Software Systems
• Global Health Informatics
• Biomedical Image Informatics
Modes of Learning

Students will be exposed to a wide range of learning experiences, varying with courses they are enrolled in. These experiences include traditional lectures, data science laboratory practicals, problem-based learning tutorials, web-based learning, as well as research projects.

Internship Opportunities

BSc(Bioinformatics) students are provided with ample opportunities to gain work experience in the industry as well as local and international research laboratories relating to bioinformatics and health data science. An internship can be taken as a credit-bearing course during the semester, or as a non-credit bearing experience during the summer break. The workplace learning experience will enable students to apply knowledge gained during their studies in real work environments.
# Curriculum Structure

<table>
<thead>
<tr>
<th>YEAR 1</th>
<th>YEAR 2</th>
<th>YEAR 3</th>
<th>YEAR 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Anchoring courses (18 credits)</strong>&lt;br&gt;BIOF1001 Introduction to Biomedical Data Science</td>
<td>BIOF2001 Artificial Intelligence in Medicine</td>
<td>BIOF3001 Big Data in Biomedical Informatics</td>
<td><strong>Capstone course (12 credits)</strong>&lt;br&gt;BIOF4001 Final Year Project</td>
</tr>
<tr>
<td><strong>Foundation courses (36 credits)</strong>&lt;br&gt;BIOC1600 Perspectives in Biochemistry</td>
<td>MATH2014 Multivariable Calculus and Linear Algebra</td>
<td><strong>Disciplinary ‘Data Science Lab’ courses (6 or 12 credits)</strong>&lt;br&gt;BIOF3002 Genome Sequencing and Data Analysis</td>
<td><strong>Disciplinary elective courses (Choose any 3 or 4) (18 or 24 credits)</strong></td>
</tr>
<tr>
<td>COMP117 Computer Programming</td>
<td>STATS2601 Probability &amp; Statistics I</td>
<td>BIOF3003 Digital Health</td>
<td>Biomedical Sciences&lt;br&gt;BIOC2600 Basic Biochemistry&lt;br&gt;BIOC 3605 Sequence Bioinformatics&lt;br&gt;BEDS2003 Human Genetics&lt;br&gt;BEDS2007 Essential Molecular Biology&lt;br&gt;BEDS3008 Essential Proteomics&lt;br&gt;BEDS3009 Genome Science&lt;br&gt;BEDS4004 Public Health Genetics</td>
</tr>
<tr>
<td>MATH1013 University Mathematics II</td>
<td>STAT2602 Probability &amp; Statistics II</td>
<td><strong>Computer Science</strong>&lt;br&gt;COMP2113 Programming Technologies&lt;br&gt;COMP2119 Introduction to Data Structures and Algorithms&lt;br&gt;COMP3314 Machine Learning&lt;br&gt;COMP3317 Computer Vision&lt;br&gt;COMP3353 Bioinformatics</td>
<td>Bioinformatics specialty courses&lt;br&gt;BIOF3004 Bioinformatics Internship&lt;br&gt;BIOF3005 Structural Bioinformatics&lt;br&gt;BIOF3006 Biomedical Software Systems&lt;br&gt;BIOF4002 Global Health Informatics&lt;br&gt;BIOF4003 Biomedical Image Informatics</td>
</tr>
<tr>
<td><strong>Common Core (36 credits)</strong>&lt;br&gt;Language (18 credits)</td>
<td><strong>Statistics</strong>&lt;br&gt;STAT3600 Linear Statistical Analysis&lt;br&gt;STAT3612 Statistical Machine Learning&lt;br&gt;STAT4602 Multivariate Data Analysis&lt;br&gt;STAT4609 Big Data Analytics</td>
<td><strong>Other electives (90 credits)</strong>&lt;br&gt;Students should ideally minor in Biomedical Data Science, Digital Health, Statistics, Computer Science, or one or more of the Biomedical Sciences minors. Selection of other electives from across the university is also possible.</td>
<td><strong>Other electives (90 credits)</strong>&lt;br&gt;Students should ideally minor in Biomedical Data Science, Digital Health, Statistics, Computer Science, or one or more of the Biomedical Sciences minors. Selection of other electives from across the university is also possible.</td>
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Professional Recognition and Career Prospects

BSc(Bioinformatics) graduates will be equipped with practical and transferable skills applicable to a rapidly maturing interdisciplinary field that is of high demand in research, hospital and industry, both locally and internationally. There is a strong growing demand for biotechnology and big data expertise in local/internationally research centres, as well as growing demand in the hospital and healthcare sector in analysis of clinical and public health data.

Some examples of tasks that graduates would be able to do include:

• Interpreting genetic testing results from patients and reporting findings to help clinicians to make treatment decisions.
• Identify patterns in epidemic outbreak-based electronic records of passengers on public transport in order to guide pandemic prevention strategies.
• Predicting how novel compounds interact with proteins to help identify new targeted therapies for diseases.

For more information on admissions
Message From the Dean

There has never been a better time to pursue a career in the health professions – and to start your journey at HKUMed. COVID-19 has put the spotlight on the importance of health to every aspect of our lives and increased demand for healthcare professionals. At the same time, HKUMed has been moving at lightning speed to advance our capabilities and meet the challenges and opportunities of the digital age. Our focus is on training leaders for the future, not only for today. The pandemic is a case in point. The years of groundwork by our scholars enabled them to be at the forefront in producing ground-breaking research that has been honoured around the world.

The high quality of our teaching and research efforts earned HKUMed a record-high ranking in the Times Higher Education subject ranking this year. We are ranked 1st in Hong Kong, 3rd best in Asia, and among the top 20 medical schools in the world – the first time we have cracked the top 20 since the rankings were launched a decade ago. Our research grabs the headlines, but this is also testimony to the value-laden education we provide for our students.

HKUMed students all receive rigorous training in their chosen disciplines, plenty of enrichment opportunities for personal and professional growth (including exchanges out of Hong Kong as these resume), exposure to innovative learning technologies, interprofessional training and encouragement to step outside your comfort zones and engage with unfamiliar situations and people. The world in all its complexities becomes your oyster when you are here.

We also keep a sharp focus on ensuring that your learning is forward-looking. Learning technologies is only one aspect of this. In your future careers, you will undoubtedly encounter the fruits of big data and artificial intelligence as applied to healthcare. Data science is now an essential part of the training we provide. Furthermore, we have launched a Bachelor of Science in Bioinformatics that will skilled in applying and innovating across a wide range of high-impact biomedical big data applications. These skills are in demand in research, industry and the healthcare sector.

To accommodate new technologies and increased enrolment in our seven programmes (which include the MBBS, BNurs, BChinMed, BPharm, BBiomedSc, BASc in Global Health and Development and BSc in Bioinformatics), you will have noticed that we are also in the midst of a major physical expansion. The 3 Sassoon Road complex will be ready in time for the start of the 2022-23 academic year and house the School of Nursing and School of Chinese Medicine. More developments are planned along Sassoon Road and at Grantham Hospital to further our learning and research environment and open new pathways for collaboration and innovation.

HKUMed offers an invaluable education to students who are inquisitive, energetic and passionate about helping others. Our current rankings tell only part of the story – the quality of our alumni testifies to the fact that we produce leaders who have positive impacts in the world. As we celebrate our 135th anniversary this year, I hope that you will join us and become part of our rich and honourable legacy.

Professor Gabriel M Leung
Dean of Medicine
About HKUMed

HKUMed is this year celebrating its 135th anniversary, making it the oldest institution of higher education in Hong Kong. We have a long reputation as a pioneer in medical education, training and research, while proudly upholding a reputation for morality, vision and care.

The challenges of the COVID-19 pandemic have highlighted how crucial medical education is to society. From providing care to patients, to leading crucial research that drove policy decisions, we are honoured to serve the global community.

In the face of these challenges, we have achieved a historically high ranking for “clinical and health” subjects in the 2022 Times Higher Education World University Rankings. The Faculty now ranks in 20th position globally and 3rd in Asia for this category.

We are proud to continue our tradition of spearheading achievement from our campus on Sassoon Road. We have trained thousands of healthcare practitioners and scientists, as well as many internationally renowned researchers and policy-makers.

Each year, we admit almost 640 students across seven programmes, which include the MBBS, BNurs, BChinMed, BPPharm, BBiomedSc, BASc(GHD) and BSc(Bioinformatics), and our student body is one of the largest for a single Faculty, totalling more than 4,850 people.
Teaching
More than 320 full-time staff from our 18 departments and schools deploy the latest technologies, such as virtual reality, to engage students in the classroom. These full-time teachers are supplemented by honorary teachers, most of whom are medical professionals.

Clinical Service
HKUMed delivers superlative clinical service and provides robust clinical governance in all settings that we serve. Our four affiliated hospitals under the HKU Health System offer valuable opportunities for students to learn more and learn better. These hospitals also represent the Faculty’s leading status in healthcare management in Hong Kong and the region.

Our members engage in a wide range of activities to share their knowledge and expertise to benefit Hong Kong society as a whole.

HKUMed graduates are a testament to the excellent education we provide and have gone on to become the leaders in their fields in Hong Kong and the world.

Research
Research is an important part of HKUMed’s global reputation and with 5 of our members ranked among the top 1% of scholars in their field in terms of citation and recognition. We are always looking ahead to the next breakthrough while nurturing our existing areas of expertise. As such, HKUMed researchers stand at the forefront of research into COVID-19 and infectious diseases globally with two of our scientists receiving the 2021 Future Science Prize in Life Sciences for their work. Our researchers are supported by ample funding, state-of-the-art facilities and the Faculty’s extensive worldwide networks.
Faculty’s Firsts

The Faculty has always been at the forefront of medical research and development of new clinical services for the benefit of mankind. With our researchers’ toil and persistence, we have made important contributions to the study and treatment of cancers and liver diseases, and have made notable advances in tissue typing, spinal surgery, infectious diseases, in-vitro fertilisation, endocrinology and tobacco-related diseases.

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
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<tbody>
<tr>
<td>1959</td>
<td>First transoral approach performed for the surgical treatment of upper cervical spine dislocations and tuberculosis in the world. Pioneered anterior approach for surgical treatment of spinal tuberculosis, known as the “Hong Kong Operation.”</td>
</tr>
<tr>
<td>1964</td>
<td>First Pharyngo-laryngo-oesophagectomy in the world.</td>
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<tr>
<td>1969</td>
<td>First kidney transplant in Hong Kong.</td>
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<td>1977</td>
<td>First microsurgical thumb replant in Hong Kong.</td>
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<tr>
<td>1983</td>
<td>First antenatal screening for hereditary blood disease established in Hong Kong.</td>
</tr>
<tr>
<td>1989</td>
<td>First maxillary swing operation for recurrent nasopharyngectomy in the world.</td>
</tr>
<tr>
<td>1990</td>
<td>First bone marrow transplant in Hong Kong.</td>
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<tr>
<td>1991</td>
<td>First liver transplant in Hong Kong.</td>
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<tr>
<td>1992</td>
<td>First heart transplant in Hong Kong.</td>
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<tr>
<td>1994</td>
<td>First allogeneic cord blood transplant in Hong Kong. First emergency adult-to-adult left lobe living donor liver transplant in the world.</td>
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<tr>
<td>Year</td>
<td>Event</td>
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</table>
| 1995 | First lung transplant in Hong Kong  
First baby in Hong Kong conceived through intracytoplasmic sperm injection was delivered |
| 1996 | First in the world to conduct an adult-to-adult right lobe living donor liver transplant  
First in Asia to show improved respiratory health in children in response to pollutant reduction after the implementation of anti-air pollution law |
| 2000 | First intervertebral disc transplant in humans in the world |
| 2001 | First catheter-based endomyocardial transplant of autologous bone marrow stem cell for treatment of severe coronary artery diseases in the world  
First radiofrequency ablation for cancers in Hong Kong |
| 2003 | First to discover the SARS coronavirus  
First to identify the source of SARS coronavirus infection |
| 2004 | First to characterize the epidemiology of SARS coronavirus |
| 2005 | First to identify the natural reservoir of SARS coronavirus |
| 2008 | First in the world to develop and launch a publicly accessible index (Hedley Environment Index) with hourly estimation of air pollution impact on adverse health outcomes and economic costs |
| 2009 | The world's first remotely controlled expandable device implantation surgery to treat children with scoliosis |
| 2010 | First to develop a patented prescription drug, an oral arsenic trioxide preparation for the treatment of acute promyelocytic leukaemia  
First combined heart and liver transplant in Hong Kong |
| 2011 | First extra-cranial intravenous-cranial vascular bypass and craniofacial resection for locally advanced recurrent nasopharyngeal carcinoma in the world |
| 2012 | First in the world to describe a model of coronavirus evolution, based on the 23 novel human and animal coronaviruses discovered over 10 years |
| 2013 | First to characterize the epidemiology of H7N9 influenza in the world |
| 2014 | First subcutaneous implantable cardioverter defibrillator in Asia  
First exome-chip analysis of lipid traits in Chinese |
| 2016 | First live birth by assisted reproduction with preimplantation genetic screening (PGS) using next generation sequencing for couples having chromosomal error in Hong Kong |
| 2018 | First comprehensive study of MERS coronaviruses in Africa  
First invention of universal antibody drug for HIV-1 prevention and immunotherapy |
| 2019 | First magnetic sphincter augmentation for gastroesophageal reflux disease in Asia |
Life At HKUMed

Medical education has been at the heart of The University of Hong Kong’s history since our inception and HKUMed has been a leader in medical education and research throughout our 130+ years of history. Today we look forward to nurturing the next generation of healthcare professionals and leaders.

There are many support systems in place at HKUMed - financial, facilities, advice and networks - to help students join various local and overseas learning programmes, including clinical attachments, exchanges, service trips and study tours, in addition to the MBBS Enrichment Year. We strongly believe this well-rounded experience is essential to the personal and professional development of our students.
The Medical Campus

The Medical Campus on Sassoon Road is home to our teaching schools and departments and their research laboratories, as well as various state-of-the-art facilities.

One major landmark at the Medical Campus is the Faculty Learning Commons, which provides a shared space for students and teachers to engage in teaching and learning activities. Many campus events are also held at the Learning Commons, making it a popular socialising spot for students.

The Yu Chun Keung Medical Library is a centre of excellence in knowledge management. The Medical Library is an integral part of the University Libraries comprising significant digital resources, multimedia as well as extensive print collections covering biomedical and health sciences. The Library became a World Health Organization Depository Library in 1993.

The Cheung Chin Lan Hong Atrium is the built expression of HKUMed’s core mission to enrich the total learning experience for students by creating a space for them to socialise and connect with outside the classroom.

The new Faculty Boardroom located in the Faculty Administration Wing provides ample space for academic conferences and professional seminars. It is equipped with cutting-edge teleconferencing equipment and an LED video wall.

With a growing student body, HKUMed has developed expansion plans to provide excellent training facilities for the next generation of healthcare professionals.

This vision emphasises the whole-person development of our students, meaning expanding communal spaces is central to the development plans. This is exemplified by the new outdoor garden on 1/F of the William M.W. Mong Block from where students can enjoy a panoramic sea view and take a breath of fresh air between classes.

A nine-storey building at 3 Sassoon Road will serve as the new home for the School of Nursing and School of Chinese Medicine and is expected to be completed in 2022. The complex will provide more than 10,000 square meters of operational floor area for lecture theatres, seminar rooms, classrooms, Learning Commons, clinical skills training centres, research laboratories and a Chinese Medicine outpatient clinic.

Looking into the future, the Sassoon Road campus will be transformed into a state-of-the-science medical campus stretching from Queen Mary Hospital (QMH) on Pokfulam Road at the top, to the Victoria Road roundabout at the bottom. A reinvigorated built environment will continue to provide exceptional support and opportunities for students, as well as taking our research to the next level.
Student Wellness

HKUMed is determined to support student growth and whole-person development. A team of professional counsellors, clinical psychologists and psychiatrists are available on the Medical Campus to provide confidential, convenient and free clinical services to all HKUMed students.

These include individual counselling, consultation, crisis intervention, diagnostic assessment, group therapy, psychoeducational programmes, and brief psychotherapy. The Student Wellness Team also strives to help students thrive in the academic environment through its Peer Supporter Programme, as well as outreach activities and workshops designed to raise mental health awareness and strengthen resilience.
You can apply to stay in one of the residential halls or colleges, which are situated on the Main Campus, Pokfulam Road, Lung Wah Street and Sassoon Road. These residences vary in style and character. Most of the study-bedrooms are shared by two students, but there are also single rooms. Two residences are under the Faculty’s management: the Madam S H Ho Residence (RMS) for Medical Students, which accommodates 163 students in single rooms, and the Patrick Manson Student Residence (PMR), which accommodates 124 students in shared bedrooms. Senior medical students undergoing clinical training at Queen Mary Hospital (QMH) are required to stay at RMS or PMR during specific specialty clerkships. These residences allow more medical and nursing students to be close to QMH for their clinical training.

**Academic Advising**

Under the University-wide Academic Advising System, all HKUMed undergraduate students are paired with an Academic Adviser. This one-on-one adviser-advisee relationship lasts for the entire period of study, aiming to provide students with support in the pursuit of their academic, career and life goals. Through the process, our students are empowered to think critically, explore available options, evaluate the progress towards their own goals, and take personal responsibility for decision-making with the guidance of teachers and academic advisers.

**Accommodation**

You can apply to stay in one of the residential halls or colleges, which are situated on the Main Campus, Pokfulam Road, Lung Wah Street and Sassoon Road. These residences vary in style and character. Most of the study-bedrooms are shared by two students, but there are also single rooms. Two residences are under the Faculty’s management: the Madam S H Ho Residence for Medical Students (RMS), which accommodates 163 students in single rooms, and the Patrick Manson Student Residence (PMR), which accommodates 124 students in shared bedrooms. Senior medical students undergoing clinical training at Queen Mary Hospital (QMH) are required to stay at RMS or PMR during specific specialty clerkships. These residences allow more medical and nursing students to be close to QMH for their clinical training.
Student Organisations

The vast variety of student-run organisations at HKUMed offer opportunities for you to extend the academic experience beyond the classroom. These societies are open for all students within the Medical Faculty and respective programmes to foster a spirit of comradeship and professional unity in the field of medical education and among future healthcare professionals. You can also join other interest groups and student societies to engage with your fellows, volunteer in healthcare-related activities, or simply just to have fun!

Our students are equally active beyond HKUMed. By participating in joint-university societies, they are exposed to various opportunities to interact with medical students and professionals from other institutions in the region, cultivate knowledge and serve the community.

“As future healthcare professionals and leaders, it is our responsibility to never shy away from the complexities of social awareness and health advocacy. As the IFMSA Regional Director for Asia-Pacific, I was an active catalyst in shaping the global health agenda with the UN, the WHO and other non-state actors. Taking on this position has convinced me to have the courage to believe that young persons can also offer perceptive insights to contemporary dialogues via meaningful youth engagement. I hope that we can further realise the untapped potential medical students have in shaping each other and the world around us.”

Mathew Chow
MBBS Year VI and former Regional Director for Asia-Pacific at the International Federation of Medical Students Association
Student Ambassador Programme

As a member of the HKUMed family, you will get the opportunity to represent the Faculty and work alongside other highly-motivated individuals through our Student Ambassador Programme. The programme provides students with a platform to meet peers from a plethora of backgrounds, and connect with prospective students who, like yourself, wish to pursue a career in healthcare and medical sciences.

Our ambassadors can choose to stay engaged with the student community in varied capacities; some may want to focus on fostering a close mentorship with prospective students through sharing more about their learning experiences, university life, and all the fun activities here at HKUMed. Others may want to cultivate their creative prowess, curating social media content for online platforms and keeping in touch with the HKUMed community. There are also opportunities for our ambassadors to nurture their public speaking skills by leading campus tours that are open to students, alumni and the general public.

“We all need guidance at some point in our lives, and serving as a Student Ambassador connects me closely with our prospective students, where I could share my insights on studying medicine whilst helping them with challenges in life. This not only enriches their journey towards medicine, but also adds meaning to mine.”

Allan Chu
MBBS Year III and Student Ambassador
Scholarships and Prizes

Scholarships and prizes are awarded to students as a reward for outstanding academic achievement, providing students with financial aid for covering cost of tuition, accommodation, enrichment activity and/or other expenses in university life. Students with financial difficulties are supported to pursue their studies and expand their ambitions.

All of this is made possible with the generous support from a large number of patrons and distinguished graduates.

A total amount of HK$22,000,000+ awarded

1400+
Scholarships and Prizes
Awarded in 2020-21

180+
Schemes designated for HKUMed students in 2020-21

Entrance Scholarships
Upon admission to HKUMed, a wide range of Entrance Scholarships are offered to students with outstanding results in open examinations and to degree holders with excellent academic performance. To promote equal learning opportunities, underprivileged students could be supported by Springboard Scholarships schemes. These schemes are often renewable annually within the normative study period, subject to satisfactory academic performance.

Enrichment Scholarships
Enrichment Scholarships aim to support students’ participation in service and humanitarian work, research attachments, exchange programmes or experiential learning activities. The value of scholarship is based on a student’s academic merit and financial need. The learning value, duration, location of the activity and other factors will also be taken into account.

Prizes
Every year, a number of prizes are offered to students at HKUMed, in recognition of their academic excellence and community engagement. Prizes are often awarded based on students’ exceptional performance in course assignments, essay writings, assessments, competitions, etc.

Financial Aid
Students in need of financial assistance to help cover the costs of their university education will find a number of options available to them. The University offers loans and bursaries for needy students supplemental to the Government Loans and Grants, while HKUMed provides emergency loans to students under special circumstances.
“The Scholarship means so much to me, both physically and mentally. Through this award, my academic merits, financial needs and heart for serving the community are registered and acknowledged.”

Li Yan Kiu - MBBS
S.K. Yee Medical Foundation David Todd Memorial Enrichment Scholarship

“This Scholarship lightens the financial burden of my family, and is a recognition of my work as a medical student in the past academic year. It encourages me to embrace current and future challenges and makes me believe that I will eventually succeed.”

Lee Wing Yiu (right) - MBBS
Leong Che-Hung Medical and Research Enrichment Scholarship

“I can feel the warmth and support from the society. The Scholarship helps me, an anonymous student, in repaying my loan and strengthening my heart of helping others with all my mighty.”

Wei Qi (second row from right) – MBBS
Loke Yew Medical Springboard Scholarship
For the past 18 years, my parents have worked tirelessly to provide me with the best opportunities possible for my future endeavors and ambitions. I recognize that has been a great burden on them, and as such, I am so thankful that this Scholarship now allows me to relieve some of the burden that my family has taken on.

Cherry But (second row from right) – BASc(GHD) Bachelor of Arts and Sciences in Global Health and Development Entrance Scholarship

This scholarship plays a big role in helping me get closer to my goal as it allows me access to numerous learning opportunities provided by the university, including but not limited to exchange and service programmes, from which I can become an all-rounded student.

Pavneet Kaur (bottom row second from left) – BNurs Academic Elite Scholarship in Nursing

I am utterly grateful that the Foundation recognises my enthusiasm in research through this essay and is empowering the idea that medical students can produce promising research outputs which change science.

Fong Chun Wah (second from left) – MBBS Sun Chieh Yeh Heart Foundation Best Paper Prize

Hall education provides a platform for us to step out of our comfort zone. This Residential Scholarship allows me to experience a fruitful and fulfilling hall life and gave me an opportunity to meet new friends in the University.

Lee Kwan Ho (left) – MBBS Leung Tong Leung Au Sue Har Residential Scholarship
Application for Admissions

If you are a Secondary 6 student in a local school, or if you are currently not a student in any secondary school but wish to apply for admissions on the strength of your Hong Kong Diploma of Secondary Education (HKDSE) results, you should apply through the Joint University Programmes Admissions System (JUPAS). Please refer to the JUPAS Guide for details. Other candidates should contact the Admissions Office of the Registry of the University for the necessary information concerning admissions and submit an application on-line at the following website: www.admissions.hku.hk.

For enquiry, please contact the Registry using the “Contact Us” page on the website or by writing to:

Admissions Office

MG14, Ground Floor, Main Building
The University of Hong Kong
Pokfulam, Hong Kong
**Requirements for JUPAS Candidates**

From 2022 onwards, the result of the Mathematics Extended Part (Modules 1 and 2) will be recognised as equivalent to that of a full elective.

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**Bachelor of Medicine and Bachelor of Surgery (JS6456)**

Selection for admissions is primarily based on academic merits at the HKDSE (or equivalent), but other factors will also be considered, e.g. performance in interviews and principal's nomination. In addition to satisfying the University entrance requirements, candidates for admissions shall satisfy all of the following requirements in HKDSE:

a) achieve the level of performance in the four core subjects as below:

<table>
<thead>
<tr>
<th>Subject</th>
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</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>4</td>
</tr>
<tr>
<td>Chinese</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics</td>
<td>2</td>
</tr>
<tr>
<td>Liberal Studies</td>
<td>2</td>
</tr>
</tbody>
</table>

b) attain at least level 3 in two electives, one of which must be:

(i) Chemistry or
(ii) Combined Science with Chemistry as one of the components

The best 6 subjects of HKDSE will be taken into consideration for admissions.

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**Bachelor of Chinese Medicine (JS6482)**

In addition to satisfying the University entrance requirements, candidates for admissions shall satisfy all of the following requirements in HKDSE:

a) achieve the level of performance in the four core subjects as below:

<table>
<thead>
<tr>
<th>Subject</th>
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</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>3</td>
</tr>
<tr>
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<td>3</td>
</tr>
<tr>
<td>Mathematics</td>
<td>2</td>
</tr>
<tr>
<td>Liberal Studies</td>
<td>2</td>
</tr>
</tbody>
</table>

b) attain at least level 3 in two electives, one of which must be:

(i) Biology or
(ii) Chemistry or
(iii) Physics or
(iv) Combined Science or
(v) Integrated Science

The best 5 subjects of HKDSE will be taken into consideration for admissions.
Bachelor of Nursing (JS6468)

In addition to satisfying the University entrance requirements, candidates for admissions shall satisfy all of the following requirements in HKDSE:

a) achieve the level of performance in the four core subjects as below:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Level Of Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>3</td>
</tr>
<tr>
<td>Chinese</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics</td>
<td>2</td>
</tr>
<tr>
<td>Liberal Studies</td>
<td>2</td>
</tr>
</tbody>
</table>

b) attain at least level 3 in two electives

The best 5 subjects of HKDSE will be taken into consideration for admissions.

Bachelor of Nursing - Advanced Leadership Track (JS6418)

In addition to satisfying the University entrance requirements, candidates for admissions shall satisfy all of the following requirements in HKDSE:

a) achieve the level of performance in the four core subjects as below:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Level Of Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>3</td>
</tr>
<tr>
<td>Chinese</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics</td>
<td>2</td>
</tr>
<tr>
<td>Liberal Studies</td>
<td>2</td>
</tr>
</tbody>
</table>

b) attain at least level 3 in two electives

The best 5 subjects of HKDSE will be taken into consideration for admissions.

* Chemistry of Combined Science with Chemistry component is required for the articulation pathway to MBBS.
Bachelor of Pharmacy (JS6494)

Selection for admissions is primarily based on academic performance in HKDSE (or equivalent), but other factors will also be considered, e.g. performance in interviews and principal’s nomination. In addition to satisfying the University entrance requirements, candidates for admissions shall satisfy all of the following requirements in HKDSE:

a) achieve the level of performance in the four core subjects as below:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Level Of Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>4</td>
</tr>
<tr>
<td>Chinese</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics</td>
<td>2</td>
</tr>
<tr>
<td>Liberal Studies</td>
<td>2</td>
</tr>
</tbody>
</table>

b) attain at least level 3 in two electives, one of which must be:
   (i) Chemistry or
   (ii) Combined Science with Chemistry as one of the components

The best 6 subjects of HKDSE will be taken into consideration for admissions.

Bachelor of Arts and Sciences in Global Health and Development (JS6250)

In addition to satisfying the University entrance requirements, candidates for admissions shall satisfy all of the following requirements in HKDSE:

a) achieve the level of performance in the four core subjects as below:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Level Of Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>5</td>
</tr>
<tr>
<td>Chinese</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics</td>
<td>2</td>
</tr>
<tr>
<td>Liberal Studies</td>
<td>2</td>
</tr>
</tbody>
</table>

b) attain at least level 3 in two electives

The best 5 subjects of HKDSE, will be taken into consideration for admissions.

* Candidates with Level 4 in English Language and good results in other HKDSE subjects will be exceptionally considered on a case-by-case basis.
Bachelor of Biomedical Sciences (JS6949)

In addition to satisfying the University entrance requirements, candidates for admissions shall satisfy all of the following requirements in HKDSE:

a) achieve the level of performance in the four core subjects as below:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Level Of Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>4</td>
</tr>
<tr>
<td>Chinese</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics</td>
<td>2</td>
</tr>
<tr>
<td>Liberal Studies</td>
<td>2</td>
</tr>
</tbody>
</table>

b) attain at least level 3 in two electives, one of which must be:
   (i) Biology or
   (ii) Chemistry or
   (iii) Combined Science with Biology as one of the components or
   (iv) Combined Science with Chemistry as one of the components

The best 6 subjects of HKDSE will be taken into consideration for admissions.

Bachelor of Science in Bioinformatics (JS6470)

In addition to satisfying the University entrance requirements, candidates for admissions shall satisfy all of the following requirements in HKDSE:

a) achieve the level of performance in the four core subjects as below:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Level Of Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>4</td>
</tr>
<tr>
<td>Chinese</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics</td>
<td>4</td>
</tr>
<tr>
<td>Liberal Studies</td>
<td>2</td>
</tr>
</tbody>
</table>

b) attain at least level 3 in two electives, one of which must be:
   (i) Biology or
   (ii) Chemistry or
   (iii) Combined Science with Biology as one of the components or
   (iv) Combined Science with Chemistry as one of the components

The best 6 subjects of HKDSE will be taken into consideration for admissions.
Requirements for Non-JUPAS Candidates

If you are a local candidate who is applying for admissions on the strength of qualifications other than the Hong Kong Diploma of Secondary Education (HKDSE), you should apply through the Non-JUPAS Admissions Scheme. “Local candidate” means that you DO NOT require a student visa/entry permit to study in Hong Kong. For example, you may be studying:

- overseas;
- at an international school or at a local school in Hong Kong but you are taking a non-local (e.g. International Baccalaureate Diploma or GCE A-level) examination either through your school or as a private candidate. According to an agreement reached between ALL Hong Kong universities and the government, if you are a local school applicant, you must have completed at least six years of secondary education when you enter the university;
- on a sub-degree (i.e. Associate Degree or Higher Diploma) programme at a Community College of a UGC-funded institution or at the Hong Kong Institute of Vocational Education (HKIVE);
- a full-time bachelor's degree programme in a local tertiary institution funded by the UGC. Please note however that following UGC’s guidelines, inter-institutional transfer, irrespective of whether there is a change of programme or discipline, is generally discouraged, unless there are exceptional circumstances and the following conditions are met:

  - you have successfully completed one year of study on a bachelor’s degree programme with excellent academic results; and
  - your application for inter-institutional transfer has been specially approved by the University on the basis of over-enrollment.

If you are a non-local candidate, you should also apply through the Non-JUPAS Admissions Scheme. The Faculty accepts applications from eligible non-local students. Competition for places is keen among local students, so non-local candidates must be exceptionally well qualified to gain admissions.

All applicants for the MBBS, BPharm, BNurs, and BChinMed programmes, both local and non-local, are required to have a good working knowledge of English and Cantonese.

Non-JUPAS candidates may be shortlisted on the basis of individual merits as shown by their academic record and other non-academic achievements for interview. The interviews are designed to assess your suitability for the programmes, including your motivation, attitude, leadership and general social awareness. Interviews will usually be conducted during the Christmas and Easter Holidays and/or in June/July/August. After the interview, offers of admissions will be made to candidates who have already satisfied the entrance requirements. Based on the interview performance and the academic results available, conditional offers may also be extended to some non-JUPAS candidates who have entered for an examination or examinations with a view to satisfying the entrance requirements by August. The offers are conditional upon their obtaining of the necessary examination results for submission to the University.