كليّة العلوم الصحية والحيوية
College of Health & Life Sciences
جامعة حمد بن خليفة
HAMAD BIN KHALIFA UNIVERSITY

College of Health and Life Sciences

Prospectus
26/27

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Excellence

Recognition of Quality Through Achievements

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Shaping Society

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Hamad Bin Khalifa University (HBKU), a member of Qatar Foundation for Education, Science, and Community Development (QF), was founded in 2010 to continue fulfilling QF's vision of unlocking human potential. HBKU is a homegrown research and graduate studies university that acts as a catalyst for positive transformation in Qatar and the region while having a global impact.

Located within Education City, HBKU seeks to provide unparalleled opportunities where inquiry and discovery are integral to teaching and learning at all levels, utilizing a multidisciplinary approach across its focus areas.

The university provides an array of graduate programs through its College of Islamic Studies, College of Humanities and Social Sciences, College of Science and Engineering, College of Law, College of Health and Life Sciences, and College of Public Policy.

HBKU is also home to three research institutes – Qatar Biomedical Research Institute (QBRI), Qatar Computing Research Institute (QCRI), and Qatar Environment and Energy Research Institute (QEERI) – which were established in 2011 in line with Qatar National Vision 2030 to seek novel solutions to grand challenges facing Qatar and the region.

Why Study at HBKU?

At Hamad Bin Khalifa University, students join a vibrant community dedicated to excellence and innovation. We cultivate human capacity through enriching academic experiences, unique collaborations with partners, and interdisciplinary education for addressing global challenges.

HBKU offers students exposure to world-renowned faculty and industry leaders, equipping them with knowledge and skills to excel in their fields. Located in a regional hub, students gain diverse perspectives to contribute positively to their development and communities globally.

Moreover, HBKU thrives with an outstanding student-to-faculty ratio in Education City, a hub providing abundant opportunities for active participation in a dynamic multicultural setting. As an HBKU student, you can play a pivotal role in an institution dedicated to innovation and shaping the future.

Research

Research is the cornerstone of Hamad Bin Khalifa University's commitment to building human capacity through interdisciplinary education and innovation that supports Qatar's journey towards sustainable growth. HBKU's interdisciplinary research and education environment is distinguished by a unique synergy among the colleges and research institutes.

The university's students, faculty, and researchers work within an ecosystem that addresses challenges of national priority and contributes to outcomes with a tangible impact on society. Collectively, they are achieving breakthroughs in the fields of biomedicine, genomics and precision medicine, information and communications technology, and sustainability, while advancing knowledge across the humanities, Islamic studies, law, and public policy.

At each of the six colleges, students work under the guidance of faculty to conduct research that results in tangible solutions and innovative outcomes.

About the College of Health and Life Sciences

College Overview

The College of Health and Life Sciences (CHLS) provides essential educational and research training to future leaders in the fields of biomedical sciences, neuroscience, precision medicine, and exercise science.

The college embodies a multidisciplinary learning approach to research and discovery and aims to become a dedicated hub of knowledge sharing in the area of health and life sciences. Its programs integrate scientific expertise by combining a seasoned collective of research partners within the university with esteemed external clinical and health science partners.

Students and Alumni

Students graduate from CHLS enriched with knowledge and experience in, state-of-the-art basic, clinical, and translational research approaches, which are foundational to advances in biomedical and health sciences. Our alumni are equipped to address the pressing needs of the healthcare sector and contribute to fulfilling the Qatar National Vision 2030.

CHLS attracts and trains outstanding students from Qatar and many other countries, all of whom possess the intellect and motivation to pursue scientific discovery within the research laboratories of the college or its research partners.

Graduates typically choose to pursue careers in the following areas:

- Academia and education
- Biomedical research
- Exercise physiology targeting precision fitness training
- Fitness, health, and wellness industries
- Healthcare
- Ministries and governmental agencies
- Pharmaceutical and biomedical companies
- Rehabilitation clinics

Faculty and Research Areas

CHLS comprises internationally recognized faculty pursuing high-impact research in important, health-related fields.

Research programs often include disease models, with an emphasis on the translation of research outcomes to address clinical challenges. The creation of multidisciplinary teams is a major focus, allowing the college to attract the necessary resources to maintain and build the technologies required to support its research goals.

Transdisciplinary collaborations drive innovation and spur the achievement of successful outcomes, aligning the expertise of the wider community of HBKU colleges and partner institutions.

Faculty are involved in the following areas of research:

- Bioinformatics
- Biomechanics
- Biopsychology
- Cancer biology
- Cardiovascular
- Drug discovery
- Epidemiology
- Exercise physiology
- Gait analysis
- Mechanobiology
- Molecular and cellular biology
- Neuroscience
- Omics (genomics, metabolomics, proteomics)
- Physical activity, health and well-being
- Rare diseases

Research Collaborations

Research is enhanced within HBKU by a highly collaborative environment at CHLS and with HBKU research institutes, partner universities within Qatar Foundation (Weill Cornell Medicine-Qatar and Carnegie Mellon University in Qatar), and Sidra Medicine.

Our Research Partners

مختبر مكافحة المنشطات قطر
Anti Doping Lab Qatar

ASPETAR سبيتار

Carnegie Mellon University Qatar

المركز الطبي البيطري للخيل
Equine Veterinary Medical Center
عضو في مؤسسة قطر
Member of Qatar Foundation

ExxonMobil

مؤسسة حمد الطبية
Hamad Medical Corporation
HEALTH • EDUCATION • RESEARCH
صحة • تعليم • بحوث

imagine
INSTITUT DES MALADIES GÉNÉTIQUES

قطر بيوبنك
qatarbiobank
for medical research
للبحوث الطبية
عضو في مؤسسة قطر
Member of Qatar Foundation

قطر جينوم
QATAR GENOME
عضو في مؤسسة قطر
Member of Qatar Foundation

جامعة قطر
QATAR UNIVERSITY

سدرة للطب
Sidra Medicine

Weill Cornell Medicine-Qatar

At a Glance

7 Programs

- Master of Science in Biological and Biomedical Sciences
- Master of Science in Exercise Science
- Master of Science in Genomics and Precision Medicine
- Master of Science in Biopsychology and Neuroscience
- PhD in Biological and Biomedical Sciences
- PhD in Genomics and Precision Medicine
- PhD in Biopsychology and Neuroscience

143

Students

*Qatari students (18.2%)

143

Alumni

75

Nationalities across HBKU

Programs

Programs

CHLS delivers innovative MS and PhD programs in biological and biomedical sciences, genomics and precision medicine, as well as biopsychology and neuroscience, and an MS program in exercise science.

Precision Medicine focuses on personalized medical treatment, while biological and biomedical sciences are foundational to establishing a mechanistic understanding of disease to promote good health. The programs equip students with the knowledge to lead scientific discovery and advance personalized healthcare, shaping future leaders who are able to address modern health threats and identify potential future challenges. The faculty are energetic and innovative, collaboratively crossing disciplines to provide novel insights on the needs of the healthcare sector. A vibrant and interactive collection of joint and adjunct faculty enriches the training platform.

Exercise science aims to develop knowledge on the relationships between participating in exercise and physical activity and human health, to achieve health benefits that enable individuals to sustain physical and mental health.

The program also trains future leaders in neuroscience to enhance research and mental healthcare in Qatar. Students gain advanced knowledge of the neural mechanisms behind behavior, aging, and brain disorders.

The objective of the colleges' training programs is to attract outstanding students from Qatar, the region, and around the world.

Students have the unique opportunity to pursue an extensive array of research-intensive MS and PhD programs:

- PhD and Master of Science in Biological and Biomedical Sciences
- PhD and Master of Science in Genomics and Precision Medicine
- PhD and Master of Science in Biopsychology and Neuroscience
- Master of Science in Exercise Science

CHLS is well-positioned to undergo substantial growth, and the university and the college offer unprecedented opportunities for professional enrichment and personal fulfillment.

Master of Science and PhD Programs in Biological and Biomedical Sciences

The Master of Science and PhD programs in Biological and Biomedical Sciences (BBS) are multidisciplinary and aim to train the next generation of leaders in the field of biological and biomedical sciences. The Master's and PhD degree paths offer students an education that provides them with an advanced level of knowledge and helps them develop critical and independent reasoning skills.

Program Focus

- The exploration of a rigorous curriculum designed to provide a strong foundation, as well as cutting-edge knowledge in both the theoretical and applied aspects of biomedically relevant areas of biology.
- The development of vital professional skills, such as clear verbal and written communication and critical evaluation of others' work.
- Students will be exposed to state-of-the-art basic, clinical, computational, and translational life sciences research.

Curriculum

Master of Science in Biological and Biomedical Sciences

A 33-credit program taught in English over two years that includes:

- Five mandatory foundational courses
- A minimum of three elective courses
- Attendance at departmental seminars
- Thesis work and laboratory training

PhD in Biological and Biomedical Sciences

A program with a minimum of 60 credits taught in English, typically over 3.5 years, which includes:

- One mandatory foundational course
- A minimum of five elective courses
- Participation in departmental seminars
- Dissertation research and laboratory training

PhD students are required to pass a qualifying examination after their second semester, and a candidacy examination after their fourth semester.

Master of Science in Exercise Science

The Master of Science (MS) in Exercise Science is a joint degree program with the top ranked exercise science program in the United States, the Arnold School of Public Health at the University of South Carolina (USC).

Capitalizing on the recognized strengths of the UofSC program, the MS in Exercise Science will establish a top-ranked educational and research degree program in exercise science within Qatar and the MENA region. The program aligns with the objectives of the Qatar National Vision 2030, aiming to promote healthy lifestyles and enhance the health and welfare of the people of Qatar.

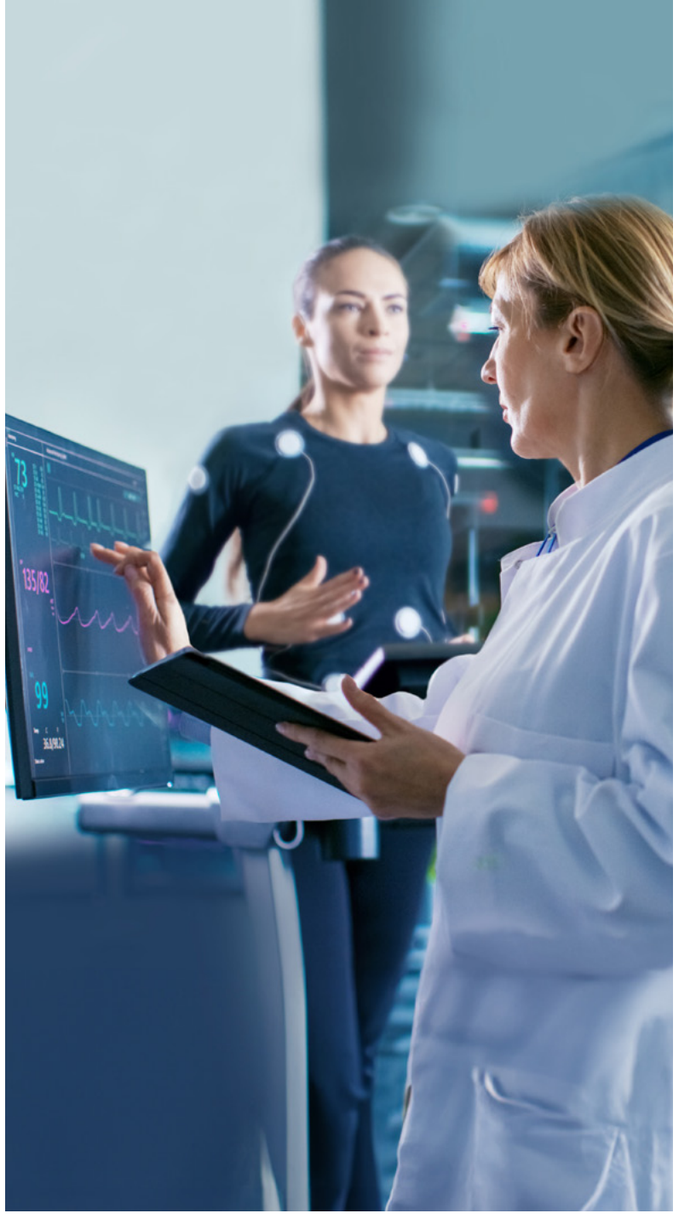
The MS in Exercise Science program is the first and only graduate program in exercise science in Qatar.

Program Focus

The MS in Exercise Science program offers an advanced understanding of how the body responds and adapts to the physical stress of exercise, and how to identify and modify behaviors and environments to optimize health and performance.

Students within the program will receive knowledge and thesis research opportunities in:

- Applied Physiology
- Biomechanics and Motor Control
- Health Aspects of Physical Activity



Curriculum

A 33-credit program, taught in English over two years, including:

- Five foundational core courses
- A minimum of four elective courses
- Research thesis

Courses include:

- Introduction to Public Health
- Applied Biostatistics
- Research Methods in Exercise Science
- Physiology of Exercise
- Cardiorespiratory Exercise Testing
- Applied Biomechanics
- Epidemiology of Physical Activity and Health
- Behavioral Aspects of Physical Activity
- Mechanisms of Motor Skill Performance

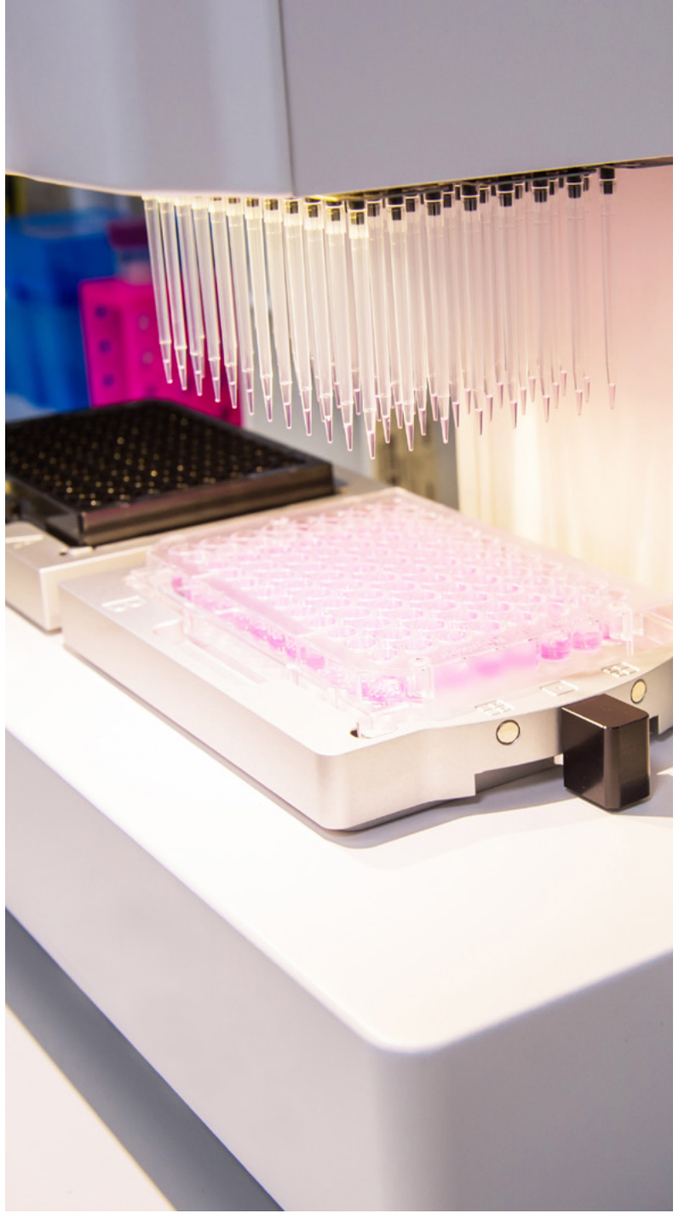
Master of Science and PhD Programs in Genomics and Precision Medicine

The Master of Science and PhD Programs in Genomics and Precision Medicine (GPM) are multidisciplinary and designed to prepare the next generation of professionals and leaders, who will help implement the use of precision and personalized medicine in the healthcare system.

The Master of Science and PhD degree paths in GPM offer students advanced knowledge and training in state-of-the-art information gathering and analysis technologies in order to integrate “omics” – the branch of biology that deals with data on global changes at the molecular level in patients – with clinical data.

Program Focus

- The exploration of a rigorous curriculum and practical training designed to provide a strong foundation, as well as cutting-edge knowledge, in both theoretical and applied aspects of genomics and precision medicine.
- Students will be exposed to the latest advancements in the field of genomics and precision medicine, and will explore state-of-the-art basic, clinical, technological, computational, and legal and ethical aspects of a fascinating, rapidly expanding sector of the life sciences.
- Throughout their studies, students will examine aspects of the four main pillars of genomics and precision medicine: clinical aspects, technology, omics, and bioethics.



Curriculum

Master of Science in Genomics and Precision Medicine

A 33-credits program, taught in English over two years, that includes:

- Five mandatory foundational courses
- A minimum of three elective courses
- Attendance at departmental seminars
- Thesis work and laboratory training

PhD in Genomics and Precision Medicine

A program with a minimum of 60 credits, taught in English, typically over 3.5 years, which includes:

- One mandatory foundational course
- A minimum of five elective courses
- Participation in departmental seminars
- Participation in the GPM journal club
- Dissertation research and laboratory training (minimum of six semesters)

PhD students are required to pass a qualifying examination after their second semester, and a candidacy examination after their fourth semester.

Master of Science and PhD in Biopsychology and Neuroscience

The Master of Science and PhD programs in Biopsychology and Neuroscience (BNS) aim to train the next generation of scientists in Neuroscience and mental health. The BNS programs are designed to enhance the research capacity and mental health care in Qatar by providing students with the necessary skills and knowledge to tackle complex problems related to brain disorders. Through these degrees, students will gain an advanced education that enables them to grasp the biological foundations of cognition and behavior.

This training will equip them with a deep understanding of the molecular and cellular mechanisms underlying the development, functioning, and aging of the nervous system.

Program Focus

The BNS programs strongly focus on applying groundbreaking technologies and artificial intelligence to tackle brain development, function, and aging in both physiological and pathological conditions. The field of neuroscience is defined by the pursuit of understanding the function and dysfunction of the nervous system.

The BNS programs aim to equip the students with the ability to synthesize, use, and advance knowledge in molecular and cellular biology, genetics, biophysics, OMICS, data mining, and artificial intelligence applied to nerve cells. Our students will receive rigorous training in critical thinking, experimental design, and statistical analysis. They will become fluent in these areas and be well-prepared to study the brain and behavior. The goal of the BNS programs is to produce highly skilled professionals to tackle the challenges of brain disorders in the context of highly competitive pressures driven by modern work and life patterns.

Curriculum

Master of Science in Biopsychology and Neuroscience

A 33-credit program, taught in English over two years, that includes:

- Five mandatory foundational courses
- A minimum of three elective courses
- Attendance of research seminars
- Thesis work and laboratory training

Courses include:

- Biopsychology
- Research Methods and Ethics in Neuroscience
- Advanced Neurosciences
- Development and Diseases of the Nervous System
- Behavior, Learning and Memory
- Advanced Molecular Biology
- Advanced Cell Biology
- Stem Cell Biology
- Scientific Communication and Professional Development
- Cancer Biology
- Advanced Human Physiology
- Advanced Genetics
- Bioinformatics
- Epigenetics
- Pharmacogenomics

PhD in Biopsychology and Neuroscience

A program with a minimum of 60 credits, taught in English, typically over 3.5 years, which includes:

- Two foundational core courses
- A minimum of four elective courses
- Attendance of Research Seminars
- Dissertation research and laboratory training

PhD students are required to pass a qualifying examination after their second semester, and a candidacy examination after their fourth semester. The program will bring together developmental neurobiology, systems neuroscience, biology of aging, biology of behavior and psychology, and artificial intelligence to stimulate research creativity and innovation.

Courses include:

- Advanced Genetics
- Advanced Neurosciences
- Advanced Molecular Biology
- Applied Biostatistics
- Artificial Intelligence (Joint course offered by CSE)
- Behavioral Aspects of Physical Activity
- Bioinformatics
- Development and Diseases of the Nervous System
- Epigenetics
- Functional Human Neuroanatomy
- Molecular and Cellular Biology of Neurodegenerative Diseases
- Pharmacogenomics
- Research Methods and Ethics in Biopsychology and Neuroscience
- Scientific Communication and Professional Development
- Stem Cell Biology

Admissions

Admission Requirements

Applicants seeking admission to the CHLS graduate programs at HBKU should have a strong academic record (minimum 3.0 GPA out of 4) from a recognized university. Applicants to the Master of Science programs should have a bachelor's degree, while applicants to the PhD programs should have a master's degree.

Applicants to the MS or PhD programs in genomics and precision medicine or biological and biomedical sciences, biopsychology and neuroscience, should have a strong background in science and evidence of coursework in biological or medical sciences. Applicants seeking admission to the MS in Exercise Science program should have a bachelor's degree in exercise science or a related field (e.g. biological/ biomedical sciences).

Applicants are required to submit a valid IELTS score of 6.5 or TOEFL score of 79 to demonstrate their proficiency in English. Further details about the language proficiency requirement and the process to seek exemption (if applicable) are available from admissions.hbku.edu.qa

Applicants with prior research experience are preferred, particularly for the PhD programs.

Application Requirements

Application

A completed online application form
admissions.hbku.edu.qa

Academic transcripts

Official electronic copies of transcripts should be submitted as part of the online application. Final transcripts and graduation statements are required for all previous university studies. All transcripts submitted should include an explanation of the grading system. For those who have not completed their current studies, transcripts must include results from the last completed semester of coursework. Transcripts in languages other than English or Arabic must be accompanied with an official translation. Applicants who are admitted to the program based on copies of or incomplete transcripts will be required to provide original transcripts upon enrollment in order to register for courses.

Standardized test results

Official copies (where required) must be sent directly to HBKU. Please refer to the institutional codes below:

- TOEFL: 4981
- IELTS: No code required. Students should ask the IELTS center where they tested to send the IELTS TRF to Hamad Bin Khalifa University

Applicants should also submit copies of their test scores with the online application.

Letters of recommendation

Applicants should submit letters of recommendation, preferably from academic referees:

- At least two letters of recommendation:
  - Biological and Biomedical Sciences programs
  - Genomics and Precision Medicine programs
  - MS in in Biopsychology and Neuroscience
- At least three letters of recommendation:
  - MS in Exercise Science program
  - PhD in Biopsychology and Neuroscience

Personal statement of interest

Applicants should submit a personal statement (300-500 words) as part of the online application. The statement should explain why the candidate is applying to the program and how their studies will contribute to the achievement of their personal objectives, including information about the applicant's research interests and achievements.

Resume/Curriculum vitae

Applicants should submit a copy of their current resume or curriculum vitae as part of the online application.

This should include the following information:

- Academic qualifications
- Professional experience
- Publications
- Research projects
- Academic awards or honors
- Conference presentations

Identification document

All applicants should submit an electronic copy of their passport as part of the online application. Nationals and residents of Qatar should also submit their valid Qatari ID.

Tuition and Student Funding

The College of Health and Life Sciences provides a limited number of tuition waivers on a competitive basis.

Program	Total Program Tuition Fees	Tuition Fees per Credit Hour	Total Program Credit Hours	Program Duration
PhD in Biological and Biomedical Sciences	QAR 270,000	QAR 4,500	60	3.5 years
PhD in Genomics and Precision Medicine	QAR 270,000	QAR 4,500	60	3.5 years
PhD in Biopsychology and Neuroscience	QAR 270,000	QAR 4,500	60	3.5 years
Master of Science in Biological and Biomedical Sciences	QAR 182,500	QAR 5,530	33	2 years
Master of Science in Genomics and Precision Medicine	QAR 182,500	QAR 5,530	33	2 years
Master of Science in Biopsychology and Neuroscience	QAR 182,500	QAR 5,530	33	2 years
Master of Science in Exercise Science	QAR 182,500	NA	33	2 years

Contact Information

Admission inquiries:
admissions.chls@hbku.edu.qa

General inquiries:
chls@hbku.edu.qa

P.O. Box: 34110
Doha – Qatar

chls_hbku
chls_hbku

chls.hbku.edu.qa