Master of Science and PhD Programs in Sustainable Environment

كلية العلوم والهندسة
College of Science & Engineering
جامعة حمد بن خليفة
HAMAD BIN KHALIFA UNIVERSITY

Master of Science and PhD Programs in Sustainable Environment

The Master of Science (MS) and Doctor of Philosophy (PhD) programs in Sustainable Environment provide students with extensive knowledge in topics related to sustainability within the natural and built environment. This includes an understanding of the causes of pollution to land, air, and water, the corresponding impacts, and the development of mitigation strategies. The program considers the need to enhance resilience against climate change-driven risks. In addition, resource management in terms of water, food, and waste are an integral component of the program.

Students conduct original and guided environmental research that concentrates on issues surrounding the support of sustainable development within the environment.

The multidisciplinary approach to the curricula builds fundamental knowledge that evolves with developments within the field, equipping graduates with the tools needed to pursue a wide variety of career paths.

Program focus

- Core skills to build a successful career in science, engineering, and technology-related areas, including ethics, technical writing, research methods, data analytics, and advanced computing methods.
- Fundamentals of key environmental processes.
- Fundamentals of sustainable development and human-environment interactions related to policy, social issues, engineering and technology, and the fundamentals of environmental processes.
- Understanding and measuring the impact of human activities such as industrial development, power production, water treatment, food production and manufacturing, transportation on land, water, and air, including solid and hazardous waste generation and disposal.
- Social and economic aspects of sustainability including demand-side management, efficiency, human capital, financing, and policymaking.
- Water resources, demand, management, and treatment processes.
- Sustainable and intelligent food production systems.
- The energy, water, and food nexus.
- Air quality and emission sources, in addition to the impact on human health, economic and social development and mitigation strategies.
- Understanding of climate change-driven risks on the natural and built environment and the development of strategies to become resilient.

Curriculum

Master of Science in Sustainable Management
A 33-credit program taught over two years that includes:

- Three core courses
- Five elective courses (six if undertaking an industrial project)
- A nine-credit research thesis or a six-credit industrial/applied project
- One semester of graduate research seminars

PhD in Sustainable Management
A 60-credit program that requires a master's degree and is typically completed over 3.5 years.
The program includes:

- Three core courses as per the MS program
- Three elective courses
- Two semesters of graduate research seminars
- A minimum of 36-credit research thesis under the supervision of an adviser and a PhD dissertation committee

PhD students should additionally pass:

- a qualifying examination in their third semester.
- a candidacy examination in their fifth semester.
- a final thesis defense to the public and their dissertation committee.

Admission and application requirements

Applicants seeking admission to the College of Science and Engineering graduate programs at HBKU should have a strong academic record (minimum 3.0 GPA out of 4.0) from a recognized university. Applicants to the master's programs should have a bachelor's degree, while applicants to the PhD programs should have a master's degree. They should have also majored in one of the following disciplines: engineering and science disciplines (preferred). Students from architecture, urban planning, business, economics, policy and social sciences demonstrating strong analytical skills will also be considered.

Applicants are required to submit an 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 (where this is an option) are available at admissions.hbku.edu.qa.

Applicants to the Master of Science and PhD Programs in Sustainable Environment are required to submit a GRE General test score at the time of application. While the GRE is not required for admission to the master's programs at the College of Science and Engineering, a strong GRE score will help strengthen the applicant's admission material.

Applicants with prior research experience are preferred, especially for the PhD programs. For further information about admission please visit: admissions.hbku.edu.qa

Application requirements

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 by 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:

- GRE: 7551
- GMAT: H6S
- 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 two letters of recommendation, one of which must be from an academic referee. Please visit admissions.hbku.edu.qa for further information about the submission process.

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. Personal statements that are incomplete or below the minimum word count will not be accepted.

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.

Student funding

The College of Science and Engineering provides opportunities for funding on a competitive basis. Further information will be provided to applicants who are admitted to the program.