Bachelor of Science in Computer Engineering

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Undergraduate program for the aspiring globally competitive computer engineering professionals.

The aim of Hamad Bin Khalifa University's Bachelor of Science in Computer Engineering is to produce globally competitive computer engineering professionals for Qatar, the region, and the wider world.

The program, delivered by HBKU's College of Science and Engineering, is built on HBKU's unique model of developing interdisciplinary programs that draw on the expert knowledge of its partner institutions alongside its own faculty. This means that students are able to take courses provided by Texas A&M University at Qatar and Carnegie Mellon University in Qatar in addition to the comprehensive range of course offerings from HBKU. Students explore the design of real-world computer engineering systems and are exposed to real-life problems and challenges through a design component that is integrated into the program, as well as through a final year project. The dynamic multidisciplinary approach of the curriculum equips the program's graduates with an exceptionally well-rounded understanding of computer engineering, ensuring that they have all the necessary skills needed for them to go on to explore a wide range of rewarding careers or further study.

Typically, the grade assessment is based on a final examination, mid-term examinations, quizzes, and assignments that include project and/or laboratory work. Credits are earned semester-by-semester, of which there are eight (two per year, spread across four years).

Each student is required to complete a final year project as an individual or as a member of a team of 2-4 classmates. The goal of this project is to give students the opportunity to integrate and synthesize the theoretical and experiential knowledge they have built up over the duration of the program. The final year project is conducted under the supervision of faculty.

Program Focus

- The cross-disciplinary aspects of computer science and electronic engineering.
- A thorough understanding of computing devices, systems, and tools – ranging from specialized embedded processors to communication networks to software development.
- The skills needed to design a computer-based system.
- The application of mathematics in engineering.
- The role of hardware and software tools in the solving of engineering problems.
- Ethical and professional responsibility in computer engineering.
- The role of computer engineering and of computer engineers in society, both at a local and a global level.

Curriculum

A 130 - credit full-time program, taught in English over four years, comprised of:

- 19 General educational courses (in humanities, social analysis, quantitative reasoning, and arts)

- Mathematics and science courses

- Core computer engineering courses

- Core curriculum electives

- Specialized electives

- General engineering electives

- English communication electives

YOU MAY WANT TO CHECK

Research

Research is integral to Hamad Bin Khalifa University's mission to help build human capacity in Qatar, playing a pivotal role in HBKU's academic programs across all its colleges.

- Qatar Environment and Energy Research Institute (QEERI)
- Qatar Biomedical Research Institute (QBRI)
- Qatar Computing Research Institute (QCRI)