

COMPUTER SCIENCE AND ENGINEERING, PHD

CSE's PhD program in Computer Science and Engineering provides students with a solid, fundamental and advanced education, as well as strong research experience and a broad understanding of aspects related to computer science and engineering that will translate into exciting, challenging, and well-compensated job opportunities in this high-demand field.

For more information, click here (<https://www.hbku.edu.qa/en/cse/phd-computer-science-engineering/>).

Requirements

Minimum hours required to complete program 60 CH

Code	Title	Hours
Core Courses		
ICT 601	Research Methods and Ethics	3
ICT 705	Applied Data Analytics	3
CSEG 710 or CSEG 780	Advanced Algorithms and Data Structures Principles of Computer System Design	3
Subtotal		9
Elective Courses		
Select three of the following:		9
Free elective: Students can take one course from any HBKU program		
CSE 602	Statistics for Science and Engineering	
CYSE 610	Applied Cryptography	
CYSE 630	Computer and Network Security	
CYSE 640	Security Risk Analysis	
CYSE 720	Data Privacy	
CYSE 727	Wireless Networks & Security	
CYSE 728	Distributed Systems Security	
CYSE 729	Multimedia Security	
CYSE 744	Network Forensics	
CYSE 745	Computational Forensics	
DSEG 660	Applied Deep Learning	
DSEG 682	Special Topics in Data Science and Engineering	
DSEG 733	Advanced Data Management System	
DSEG 735	Learning from Data	
DSEG 760	Machine Learning	
ICT 615	AI for Social Media and Multimedia Applications	
ICT 620	Computer Graphics	
ICT 632	Advanced Applications of the Web and Internet	
ICT 660	Principles of Health Informatics	
ICT 665	Artificial Intelligence and Machine Learning in Healthcare	
ICT 666	Computational Bioinformatics	
ICT 668	Medical Image Processing	
ICT 670	Information Technology Project Management	
ICT 671	Information Systems Management	
ICT 675	Healthcare Information Systems	
ICT 676	Information Systems Analysis and Design	
ICT 690	Special Topics	
ICT 706	Independent Studies	
ICT 716	Data Science Tools and Applications	

ICT 720	Cloud Computing	
ICT 725	Quantum Computing	
ICT 736	Interactive Design for Health care	
Subtotal		9
Seminar		
Must pass twice		
ICT 701	Graduate Research Seminars	0
Subtotal		0
Dissertation		
ICT 890	Dissertation Hours	0-9
Subtotal		42
Non-Course Requirements		
899	Dissertation Defense	0
790	Doctoral Qualifying Exam	0
799	Candidacy Exam	0
Total Hours		60

Study Plan

Course	Title	Hours
First Year		
First Semester		
ICT 601	Research Methods and Ethics	3
ICT 701	Graduate Research Seminars	0
ICT 705	Applied Data Analytics	3
Elective 1		3
Semester Hours		9
Second Semester		
CSEG 710 or CSEG 780	Advanced Algorithms and Data Structures or Principles of Computer System Design	3
Elective 2		3
Elective 3		3
Semester Hours		9
Second Year		
First Semester		
ICT 701	Graduate Research Seminars	0
ICT 890	Dissertation Hours	9
Semester Hours		9
Second Semester		
ICT 890	Dissertation Hours	9
Semester Hours		9
Third Year		
First Semester		
ICT 890	Dissertation Hours	9
Semester Hours		9
Second Semester		
ICT 890	Dissertation Hours	9
Semester Hours		9
Fourth Year		
First Semester		
ICT 890	Dissertation Hours	6
Semester Hours		6
Total Hours		60