CYBERSECURITY, MASTER OF SCIENCE

Cybersecurity is a multidisciplinary field addressing issues that ensure secure and reliable operations at all levels of interconnected computing and networking systems. The Master of Science in Cybersecurity is designed to train graduate scholars, professionals, entrepreneurs, leaders, and researchers in the advanced knowledge and skills required to fully understand and implement the technologies, tools, management methods, and policy issues related to cybersecurity.

This Master of Science program not only covers multidisciplinary fields related to cybersecurity technology but also examines policy, ethics, and management related to IT security and cyber threats. The program leverages strong partnerships and collaborations both within HBKU and beyond the university. Delivery of the program involves collaborations with HBKU's research institutes, most notably with QCRI.

For more information, click here (https://www.hbku.edu.qa/en/cse/ms-cybersecurity/).

Requirements

Minimum hours required to complete program 33 CH

Code	Title	Hours
Core Courses		
CYSE 610	Applied Cryptography	3
CYSE 630	Computer and Network Security	3
CYSE 640	Security Risk Analysis	3
ICT 601	Research Methods and Ethics	3
Subtotal		12
Elective Courses		
Select four of the following:		12
	Free elective: Students can take one course from any HBKU program	
CSE 602	Statistics for Science and Engineering	
CSEG 605	Convex Optimization for Large-Scale and Distributed Systems	
CSEG 710	Advanced Algorithms and Data Structures	
CSEG 780	Principles of Computer System Design	
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 733	Advanced Data Management System	
DSEG 735	Learning from Data	
ICT 632	Advanced Applications of the Web and Internet	
ICT 690	Special Topics	
ICT 705	Applied Data Analytics	
ICT 706	Independent Studies	
ICT 716	Data Science Tools and Applications	
ICT 720	Cloud Computing	
ICT 725	Quantum Computing	
Subtotal		12
Seminar		

Must pass one time		
ICT 701	Graduate Research Seminars	0
Subtotal		0
Thesis or Project		
Select one of the following:		0-9
ICT 695	Master's Thesis Hours	
ICT 698	Industrial/ Project (+ One elective from list above)	
Subtotal		9
Non-Course Requirements		
699	Thesis Defense	0
Total		**33**

Study Plan
Project

Course	Title	Hours
First Year		
First Semester		
CYSE 610	Applied Cryptography	3
CYSE 630	Computer and Network Security	3
ICT 601	Research Methods and Ethics	3
ICT 701	Graduate Research Seminars	0
	Semester Hours	**9**
Second Semester		
CYSE 640	Security Risk Analysis	3
Elective 1		3
Elective 2		3
	Semester Hours	**9**
Second Year		
First Semester		
Elective 3		3
Elective 4		3
Elective 5		3
	Semester Hours	**9**
Second Semester		
ICT 698	Industrial/ Project	6
	Semester Hours	**6**
	Total Hours	**33**

Thesis

Course	Title	Hours
First Year		
First Semester		
CYSE 610	Applied Cryptography	3
CYSE 630	Computer and Network Security	3
ICT 601	Research Methods and Ethics	3
ICT 701	Graduate Research Seminars	0
	Semester Hours	**9**
Second Semester		
CYSE 640	Security Risk Analysis	3
Elective 1		3
Elective 2		3
	Semester Hours	**9**
Second Year		
First Semester		
ICT 695	Master's Thesis Hours	3
Elective 3		3
Elective 4		3
	Semester Hours	**9**

Second Semester

ICT 695	Master's Thesis Hours	6
	Semester Hours	**6**
	Total Hours	**33**