



**CANADIAN  
UNIVERSITY DUBAI**

Your portal to Canadian education

**Bachelor of Science in Cybersecurity (BScCYS)  
Program Viewbook  
Canadian University Dubai**



**INSPIRING MINDS  
TRANSFORMING LIVES**

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## Program Overview

The Bachelor of Science in Cybersecurity (BScCYS) is a 4-year program preparing students for careers in network, web and applications security. The program equips students with experience in network and cyber-attacks, AI-driven solutions and how to defend and prevent them, as well as the ethical implications of security. Cyber Security graduates are in high demand in various industries due to the UAE's focus on diversifying its economy. Graduates can pursue roles such as Chief Information Security Officer, Forensic Computer Analyst, and Cyber Security Engineer.

## Program Requirements

Requirements	Compulsory Cr. Hrs.	Elective Cr. Hrs.	Total Cr. Hrs.
University Requirements (GE Courses)	21	06	27
Program Core Requirements (Core Courses)	64	-	64
Program Major Requirements	33	03	36
<b>Total</b>	<b>118</b>	<b>09</b>	<b>127</b>

## University Requirements [General Education Courses - 27 Credits]

Course Code and Title		Pre/Co-requisite	Cr. Hrs.
<b>Compulsory Courses (21 Credit Hours)</b>			
LNG 181	English I for Engineering & Computing	None	3
LNG 182	English II for Engineering & Computing	LNG 181	3
GED 196E	Communication Skills in Arabic 1	None	3
GED 198E	Islamic Culture	None	3
GED 199E	UAE Society	None	3
ENT 141	Fundamentals in Innovation and Entrepreneurship 1	None	2
ENT 142	Fundamentals in Innovation and Entrepreneurship 2	ENT 141	1
ENT 241	Entrepreneurship 1	ENT 142	2

ENT 242	Entrepreneurship II	ENT 241	1
<b>Elective Courses (6 Credit Hours)</b>			
BIO 101	Biology I	None	3
SHS 103	Chemistry	None	3
SCI 210	Modern Physics	None	3

### Program Core Requirement – Compulsory Courses (64 Credit Hours)

Course Code and Title		Pre/Co-requisite	Cr. Hrs.
BCS 101	Elements of Computing	None	3
BCS 102	Introduction to Computing Science I	BCS 101	3
MTH 112	Calculus I	Pass the Math Placement test or MTH 012	3
MTH 113	Calculus II	MTH 112	3
MTH 114	Linear Algebra	MTH 112	3
MTH 120	Discrete Mathematics	None	3
MTH 130	Probability and Statistics	MTH 112	3
MTH 203	Discrete Mathematics for Computing Science	MTH 120, BCS 102	3
BCS 201	Logic for Computing Science	MTH 120	3
BCS 202	Introduction to Computing Science II	BCS 102	3
BCS 203	Software Specifications	BCS 202, BCS 201	3
BCS 222	Programming Paradigms	BCS 202, BCS 201	3
BCS 206	Information Structures	BCS 202, MTH 203	3
ENG 210	Computer Architecture	BCS 202 or ENG 101	4
BCS 323	System-Level Programming	BCS 102	3
BCS 311	Scientific Computing	BCS 102, MTH 114	3
BCS 305	Software Architecture	BCS 203, BCS 206	3
BCS 306	Database Management Systems	BCS 202, BCS 201	3
BCS 309	Algorithms I	BCS 201, BCS 206	3
BCS 401	Ethics for Computing Professionals	None	3

ENG 420	Internship	90 Cr. Hrs., CGPA 2.0	3
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### Program Major Requirement – Compulsory Courses (33 Credit Hours)

Course Code and Title		Pre/Co-requisite	Cr. Hrs.
<b>Program Major Requirement – Compulsory Courses (33 Credit Hours)</b>			
BCS 301	Operating Systems	ENG 210, BCS 206	4
BCS 303	Security Principles and Practices	BCS 308	4
BCS 221	Communication Networks	BCS 102	3
CYS 311	Security Threats and Risk Analysis	BCS 303	3
CYS 312	Cryptographic Algorithms and Protocols	BCS 203, BCS 204, BCS 303, BCS 309 (co)	3
BCS 405	Artificial Intelligence	BCS 206, BCS 205	3
BCS 410	Computer Science Project	Completed 90 Cr. Hrs.	6
CYS 411	Engineering Secure Software	CYS 312	3
CYS 412	Mobile and Wireless Security	CYS 411, BCS 308	4

### Program Major Requirement – Elective Courses (3 Credit Hours)

Course Code and Title		Pre/Co-requisite	Cr. Hrs.
SWS 215	Web Development	<b>BCS 306</b>	<b>3</b>
CYS 413	Web Application Security and Testing	<b>CYS 411</b>	<b>3</b>
CYS 414	Penetration Testing and Ethical Hacking	<b>CYS 411</b>	<b>3</b>
CYS 415	Malicious Software	<b>CYS 411</b>	<b>3</b>
CYS 416	Human and Organizational Security	<b>BCS 303</b>	<b>3</b>
<b>Total Program Credits Hours:</b>		<b>127</b>	



## Program Prerequisite Structure



