

## Bachelor of Science in Cybersecurity

### Four-year study plan (120 credit hours)

Year	First Semester	Credits	Prerequisites	Second Semester	Credits	Prerequisites
First Year	ENG 103: English I	3	-	ENG 104: English II	3	ENG 103
	MTH 100: College Algebra	3	-	MAT 110: Calculus I	3	MTH 100
	CIT 100: Computer Concepts and Applications	3	-	MAT 130: Linear Algebra	3	MTH 100
	GED 101: Islamic Culture	3	-	SYS 100: Computer Programming	3	CIT 100
	MAT 140: Probability and Statistics	3	-	IES 112: Introduction to Environmental Sustainability	3	-
	GED 112: Contemporary Emirati Studies	3	-	GED-Free Elective	3	-
<b>Total</b>		<b>18</b>			<b>18</b>	
Second Year	MAT 150: Numerical Analysis	3	MAT 110	MAT 120: Calculus II	3	MAT 110
	MAT 160: Discrete Mathematics	3	MTH 100	IES 111: Innovation, Entrepreneurship, and Sustainability	3	-
	SYS 310: Object Oriented Programming	3	SYS 100 Co- requisites	SYS 240: Introduction to Cyber Security Engineering	3	CIT 100
	SYS 320: Object Oriented Programming Lab	1		SYS 345: Fundamentals of Data & Network Communication for Cybersecurity	3	CIT 100, ECE 210
	ECE 210: Digital Systems	3	- Co- requisites	SYS 340: Data Structures	3	SYS 100
	ECE 325: Digital Systems Lab	1				
<b>Total</b>		<b>14</b>			<b>15</b>	

Third Year	SYS 330: Operating Systems	3	CIT 100, SYS200	SYS 425: Secure Software Engineering	3	SYS 240
	SYS 350: Introduction to Network Security	3	SYS 345	SYS 428: Information Security Policy and Governance	3	SYS 340
	SYS 370: Database Management Systems	3	SYS 340, SYS 100	SYS 430: System Security and Resilience	3	SYS 240
	SYS 385: Cybersecurity Architecture and Design	3	SYS 240	SYS 410: Cryptography Fundamentals	3	MAT 150
	SYS 485: Internship I	2	60 cr. Hrs	SYS 472: Information Privacy and Security	3	SYS 385
<b>Total</b>		<b>14</b>			<b>15</b>	
Fourth Year	SYS 486: Internship II	2	SY S485 + 80 cr. Hrs	SYS 474: Reverse Software Engineering	3	SYS 100
	SYS 440: Ethical Hacking Laboratory	2	SYS 350	One Major Elective	3	80 cr. Hrs
	SYS 450: Penetration Testing Laboratory	2	SYS 350, SYS 370	One Major Elective	3	80 cr. Hrs
	SYS 460: Computer Forensics Laboratory	2	SYS 350, SYS 370	SYS 470: Industrial Control Systems Security	3	SYS 430
	One Major Elective	3	80 cr. Hrs	SYS 490: Senior Graduation Project	3	SYS 486 + 90 cr. Hrs
<b>Total</b>		<b>11</b>			<b>15</b>	