

Study Plan

Bachelor of Science in Cyber Security

Semester	Course Code		Course Title	Pre/Co Requisite	Credit Hours
Semester 1	LNG	181	English I for Engineering and Computing	None	3
	XXX	XXX	GE Elective (1)	None	3
	MTH	112	Calculus I	Pass Math Placement Test or MTH 012	3
	BCS	101	Elements of Computing	None	3
	ENT	141	Fundamentals of Innovation and Entrepreneurship 1	None	2
					14
Semester 2	MTH	120	Discrete Mathematics	None	3
	LNG	182	English II for Engineering and Computing	LNG 181	3

	BCS	102	Introduction to Computing Science I	BCS 101	3
	MTH	113	Calculus II	MTH 112	3
	XXX	XXX	GE Elective (2)	None	3
	ENT	142	Fundamentals of Innovation and Entrepreneurship 2	ENT 141	1
					16
Semester 3	MTH	114	Linear Algebra	MTH 112	3
	MTH	130	Probability and Statistics	MTH 112	3
	MTH	203	Discrete Mathematics for Computing Science	BCS 102, MTH 120	3
	BCS	201	Logic for Computing Science	MTH 120	3
	BCS	202	Introduction to Computing Science II	BCS 102	3
	ENT	241	Entrepreneurship 1	ENT 142	2

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Semester 4	ENG	210	Computer Architecture	BCS 202 or ENG 101	4
	BCS	203	Software Specifications	BCS 201, BCS 202	3
	BCS	206	Information Structures	BCS 202, MTH 203	3
	BCS	221	Communication Networks	BCS 102	3
	BCS	222	Programming Paradigms	BCS 201, BCS 202	3
	ENT	242	Entrepreneurship 2	ENT 241	1
Semester 5	GED	198	Islamic Culture	None	3
	BCS	301	Operating Systems	BCS 206, ENG 210	4
	BCS	303	Security Principles and Practices	BCS 221	4

	BCS	305	Software Architecture	BCS 203, BCS 206	3
	BCS	311	Scientific Computing	BCS 102, MTH 114	3
					17
Semester 6	BCS	306	Database Management Systems	BCS 201, BCS 202	3
	BCS	309	Algorithms I	BCS 201, BCS 206	3
	CYS	311	Security Threats and Risk Analysis	BCS 303	3
	CYS	312	Cryptographic Algorithms and Protocols	BCS 203, BCS 303	3
	BCS	323	System-Level Programming	BCS 102	3
					15
Semester 7	GED	196	Communication Skills in Arabic 1	None	3

	BCS	401	Ethics for Computing Professionals	None	3
	CYS	411	Engineering Secure Software	CYS 312	3
	BCS	410	Computer Science Project	Completed 90 Credit Hours	6
					15
Semester 8	BCS	410	Computer Science Project (Cont.)	Completed 90 Credit Hours	--
	GED	199	UAE Society	None	3
	BCS	405	Artificial Intelligence	BCS 206, BCS 222	3
	CYS	412	Mobile and Wireless Security	BCS 308, CYS 411	4
	XXX	XXX	Program Major Elective		3
					13
Internship* to be taken in summer after completion of 90 Cr. Hrs. and CGPA 2.0 or more.					3

Total		127
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* The internship is a mandatory course of an undergraduate program with the purpose of providing students with an opportunity to have professional work experience in a setting related to the student's major. The duration of an internship is based on the program of study. However, all the undergraduate students from Business, Engineering, Computer Science, Information Technology, Architecture and Interior Design are expected to spend at least sixteen (16) weeks at an organization providing internship experience.