College of Arts and Science

Bachelor in Computer Science

Study Plan 2021/2022

Programme Study Plan								
No.	Course Code	Course Title	Prerequisite	Lec	Lab	ASU Credit	NQF Credit	NQF Level
Year 1 – First Semester (15 Cr)								
1	ENG 111	Upper-Intermediate English	Oxford test score > 50 /ENG 098	3	0	3	12	5
2	CS 104	Computer Skills	-	2	2	3	12	5
3	CSC 101	Mathematics 1	-	2	2	3	12	6
4	CSC 111	Structured Programming	-	2	2	3	12	6
5	CSC 103	Probability and Statistics	-	2	2	3	12	6
Year 1 – Second Semester (18 Cr)								
1	ENG 112	Advanced English	ENG 111	3	0	3	12	5
2	-	University Elective (Group 1)	-	3	0	3	12	5
3	HR 106	Human Rights	-	3	0	3	12	5
4	CSC 102	Discrete Mathematics	-	2	2	3	12	6
5	CSC 141	Communication Skills	-	3	0	3	12	6
6	CSC 142	Computer Ethics and Social Responsibility	ENG111	3	0	3	12	6
Year 2 – First Semester (18 Cr)								
1	-	University Elective (Group 2)	-	3	0	3	12	6
2	ARB 101	Arabic Language	-	3	0	3	12	6
3	CSC 202	Digital Logic	CSC 102	2	2	3	12	6
4	CSC 203	Mathematics 2	CSC 101	2	2	3	12	6
5	CSC 212	Object-Oriented Programming I	CSC 111	2	2	3	12	6
6	CSC 222	Software Engineering I	CSC 141	2	2	3	12	6
Year 2 – Second Semester (18 Cr)								

1	HBH 105	Bahrain Civilization and History	-	3	0	3	12	6
2	CSC 215	Data Structures	CSC 212	2	2	3	12	7
3	CSC 221	Database Systems	CSC 212	2	2	3	12	6
4	CSC 231	Computer Organization and Architecture	CSC 202	2	2	3	12	7
5	CSC 241	Scientific Research Methods	CSC 103	3	0	3	12	7
6	CSC 322	Web Based Software Development I	CSC 222	2	2	3	12	7
Year 3 – First Semester (18 Cr)								
1	CSC 304	Artificial Intelligence	CSC 212	2	2	3	12	7
2	CSC 314	Object Oriented Programming II	CSC 212	2	2	3	12	7
3	CSC 321	Systems Analysis and Design	CSC 221	2	2	3	12	7
4	CSC 325	Database Development	CSC 221	2	2	3	12	7
5	CSC 331	Operating Systems	CSC 231	3	0	3	12	7
6	-	Programme Elective (Group 1)	-			3	12	7
Year 3 – Second Semester (18 Cr)								
1	BA 161	Introduction to Entrepreneurship	-	3	0	3	12	6
2	CSC 301	Numerical Analysis	CSC 203	2	2	3	12	7
3	CSC 302	Computational Theory	CSC 102 & CSC 215	3	0	3	12	7
4	CSC 323	Visual Programming	CSC 314&CSC 221	2	2	3	12	8
5	CSC 332	Data Communication and Computer Networks	CSC 331	2	2	3	12	8
6	-	Programme Elective (Group 1)	-			3	12	7
Year 4 – First Semester (15 Cr)								
1	CSC 401	Algorithms Design & Analysis	CSC 102 & CSC 215	3	0	3	12	8
2	CSC 402	Compilers Design	CSC 302	3	0	3	12	8
3	CSC 425	Graduation Project 1	CSC 241&90 Hrs	3	0	3	12	8
4	CSC 441	Internship	CSC 321&90 Hrs	3	0	3	20	8
5	-	Programme Elective (Group 2)	-			3	12	8
Year 4 – Second Semester (15 Cr)								
1	CSC 426	Graduation Project 2	CSC 425	3	0	3	12	8

2	CSC 435	Ciphering and Computer Security	CSC 332	3	0	3	12	8
3	CSC 436	Mobile Computing	CSC 332	3	0	3	12	8
4	-	Programme Elective (Group 2)	-			3	12	8
5	-	Programme Elective (Group 2)	-			3	12	8

University Elective Courses

University Elective Courses (6 Cr)						
No.	Course Code	Course Title	Prerequisite	ASU Credit	NQF Credit	NQF Level
Group 1 (3 Cr)						
1	ISL101	Islamic Culture	-	3	12	6
2	ISL102	Islamic Ethics	-	3	12	6
3	ISL103	Islam & Contemporary Issues	-	3	12	6
Group 2 (3 Cr)						
1	LIB101	Introduction to Library Science	-	3	12	5
2	MAN101	Man and Environment	-	3	12	5
3	SOC101	Introduction to Sociology	-	3	12	5
4	SPT101	Special Topics	-	3	12	5
5	CS205	Computer Applications	CS104	3	12	5
6	LFS102	Thinking and communications skills development	-	3	12	5

Programme Elective Courses

Programme Elective Courses (15 Cr)								
No.	Course Code	Course Title	Prerequisite	Lec	Lab	ASU Credit	NQF Credit	NQF Level
Group 1 (6 Cr)								
1	CSC 204	Linear Algebra	CSC 203	2	2	3	12	7
2	CSC 305	Operations Research	CSC 103	3	0	3	12	7
3	CSC 326	Mobile Application Development	CSC 322&CSC 221	2	2	3	12	7
4	CSC 327	Web Based Software Development II	CSC 322&CSC 221	2	2	3	12	7

5	CSC 328	Human computer interaction	CSC 222	3	0	3	12	7
6	CSC 329	Multimedia Systems	CSC 322	2	2	3	12	7
7	CSC 421	Software Engineering II	CSC 222	2	2	3	12	7
Group 2 (9 Cr)								
1	CSC 312	Programming Languages Concepts	CSC 314	3	0	3	12	8
2	CSC 315	Data Mining	CSC 304	2	2	3	12	8
3	CSC 343	Special Topics in Computer Science	DEPT. APPROVAL	3	0	3	12	8
4	CSC 403	Image Processing	CSC 401	2	2	3	12	8
5	CSC 411	Computer Graphics	CSC 401	2	2	3	12	8
6	CSC 437	Cloud computing	CSC 332	2	2	3	12	8
7	CSC 438	Parallel and Distributed Computing	CSC 332	2	2	3	12	8