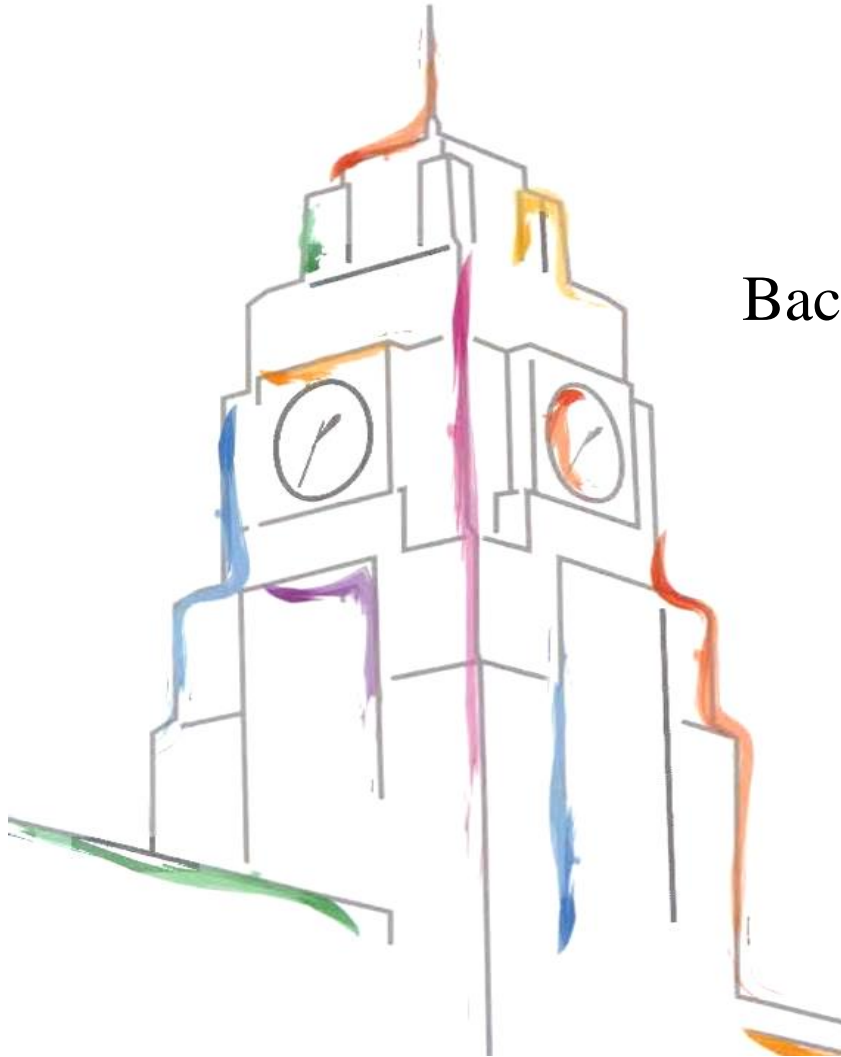


# ASU



جامعة العلوم التطبيقية  
APPLIED SCIENCE UNIVERSITY



## Bachelor in Computer Science Study Plan

Programme Study Plan								
No.	Course Code	Course Title	Prerequisite	Lec	Lab	ASU Credit	NQF Credit	NQF Level
Year 1 – First Semester (15 Cr)								
1	ENG111	Upper Intermediate English	Oxford test score > 50 /ENG098	3	-	3	12	5
2	CS104	Computer Skills	-	1	4	3	12	5
3	CSC101	Mathematics 1	-	2	2	3	12	5
4	CSC111	Structured Programming	-	2	2	3	12	5
5	CSC 103	Probability and Statistics	-	2	2	3	12	6
Year 1 – Second Semester (18 Cr)								
1	ENG112	Advanced English	ENG111	3	-	3	12	5
2	-	University Elective (1)	-	3	-	3	12	5
3	HR106	Human Rights	-	3	-	3	12	5
4	CSC 102	Discrete Mathematics	CSC 101	2	2	3	12	6
5	CSC141	Communication Skills	-	3	-	3	12	6
6	CSC142	Computer Ethics and Social Responsibility	ENG111	3	-	3	12	6
Year 2 – First Semester (18 Cr)								
1	-	University Elective (2)	-	3	-	3	12	6
2	ARB101	Arabic Language	-	3	-	3	12	6
3	CSC202	Digital Logic	CSC111	2	2	3	12	6
4	CSC203	Mathematics 2	CSC101	2	2	3	12	6
5	CSC212	Object-Oriented Programming I	CSC111	2	2	3	12	6
6	CSC222	Software Engineering I	CSC141	2	2	3	12	6
Year 2 – Second Semester (18 Cr)								
1	HBH105	Bahrain Civilization and History	-	3	0	3	12	6
2	CSC215	Data Structures	CSC212	2	2	3	12	7
3	CSC221	Database Systems	CSC212	2	2	3	12	6
4	CSC231	Computer Organization and Architecture	CSC202	2	2	3	12	6
5	CSC241	Scientific Research Methods	CSC103	3	0	3	12	7

6	CSC322	Web Based Software Development I	CSC222	2	2	3	12	7
Year 3 – First Semester (18 Cr)								
1	CSC304	Artificial Intelligence	CSC212	2	2	3	12	7
2	CSC314	Object Oriented Programming II	CSC212	2	2	3	12	7
3	CSC321	Systems Analysis and Design	CSC221	2	2	3	12	7
4	CSC325	Database Development	CSC221	2	2	3	12	7
5	CSC331	Operating Systems	CSC231	3	-	3	12	7
6	-	Programme Elective (1)	-			3	12	7
Year 3 – Second Semester (18 Cr)								
1	BA161	Introduction to Entrepreneurship	-	3	-	3	12	6
2	CSC301	Numerical Analysis	CSC203	2	2	3	12	7
3	CSC302	Computational Theory	CSC102 + CSC 215	3	-	3	12	7
4	CSC323	Visual Programming	CSC314+CSC221	3	2	3	12	8
5	CSC332	Data Communication and Computer Networks	CSC331	2	2	3	12	8
6	-	Programme Elective (2)	-			3	12	7
Year 4 – First Semester (18 Cr)								
1	CSC401	Algorithm Design and Analysis	CSC102 + CSC 215	3	-	3	12	8
2	CSC402	Compilers Design	CSC302	3	-	3	12	8
3	CSC425	Graduation Project 1	CSC241+90 credit hours	3	-	3	12	8
4	CSC441	Internship	CSC321+90 credit hours	3	-	3	12	8
5	-	Programme Elective (3)	-			3	12	8
Year 4 – Second Semester (15 Cr)								
1	CSC426	Graduation Project 2	CSC425	3	-	3	12	8
2	CSC435	Ciphering and Computer Security	CSC332	3	-	3	12	8
3	CSC436	Mobile Computing	CSC332	3	-	3	12	8
4	-	Programme Elective (4)	-			3	12	8
5	-	Programme Elective (5)	-			3	12	8

## University Elective Courses

University Elective Courses						
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	-	3	12	5
6	LFS102	Thinking and communication skills development	-	3	12	5

## Programme Elective Courses

Programme Elective Courses								
No.	Course Code	Course Title	Prerequisite	Lec	Lab	ASU Credit	NQF Credit	NQF Level
Group 1 (6 Cr)								
1	CSC204	Linear Algebra	CSC203	2	2	3	12	7
2	CSC305	Operations Research	CSC103	3	-	3	12	7
3	CSC326	Mobile Application Development	CSC322+CSC221	2	2	3	12	7
4	CSC327	Web Based Software Development II	CSC322+CSC221	2	2	3	12	7
5	CSC328	Human computer interaction	CSC222	3	-	3	12	7
6	CSC329	Multimedia Systems	CSC322	2	2	3	12	7
7	CSC421	Software Engineering II	CSC222	2	2	3	12	7
Group 2 (9 Cr)								
1	CSC312	Programming Language Concepts	CSC314	3	-	3	12	8
2	CSC315	Data Mining	CSC304	2	2	3	12	8
3	CSC343	Special Topics in Computer Science	DEPT. APPROVAL	3	-	3	12	8

4	CSC403	Image Processing	CSC401	2	2	3	12	8
5	CSC411	Computer Graphics	CSC401	2	2	3	12	8
6	CSC437	Cloud computing	CSC332	2	2	3	12	8
7	CSC438	Parallel and Distributed Computing	CSC332	2	2	3	12	8