

ASU



جامعة العلوم التطبيقية
APPLIED SCIENCE UNIVERSITY

Bachelor in Computer Science Study Plan

Year 1 – Semester 1(15 Credit Hours)					
Course Code	Course Name	Lec	Lab/Tut	Credit	Prerequisite
ENG111	Upper Intermediate English	3	-	3	Oxford test score > 50 /ENG098
CS104	Computer Skills	1	4	3	-
CSC101	Mathematics 1	3	1	3	-
CSC111	Structured Programming	2	2	3	-
CSC102	Discrete Mathematics	3	1	3	-
Year 1 – Semester 2 (18 Credit Hours)					
Course Code	Course Name	Lec	Lab/Tut	Credit	Prerequisite
ENG112	Advanced English	3	-	3	ENG111
-	University Elective (1)	3	-	3	-
HR106	Human Rights	3	-	3	-
CSC103	Probability and Statistics	3	1	3	-
CSC141	Communication Skills	3	-	3	-
CSC142	Computer Ethics and Social Responsibility	3	-	3	ENG111
Year 2 – Semester 1 (18 Credit Hours)					
Course Code	Course Name	Lec	Lab/Tut	Credit	Prerequisite
-	University Elective (2)	3	-	3	-
ARB101	Arabic Language	3	-	3	-
CSC202	Digital Logic	2	2	3	CSC102
CSC203	Mathematics 2	3	1	3	CSC101
CSC212	Object-Oriented Programming I	2	2	3	CSC111
CSC222	Software Engineering I	2	2	3	CSC141
Year 2 – Semester 2 (18 Credit Hours)					
Course Code	Course Name	Lec	Lab/Tut	Credit	Prerequisite
HBH105	Bahrain Civilization and History	3	-	3	-
CSC215	Data Structures	2	2	3	CSC212
CSC221	Database Systems	2	2	3	CSC212
CSC231	Computer Organization and Architecture	2	2	3	CSC202

CSC241	Scientific Research Methods	3	-	3	CSC103
CSC322	Web Based Software Development I	2	2	3	CSC222
Year 3 – Semester 1 (18 Credit Hours)					
Course Code	Course Name	Lec	Lab/Tut	Credit	Prerequisite
CSC304	Artificial Intelligence	2	2	3	CSC212
CSC314	Object Oriented Programming II	2	2	3	CSC212
CSC321	Systems Analysis and Design	2	2	3	CSC221
CSC325	Database Development	2	2	3	CSC221
CSC331	Operating Systems	3	-	3	CSC231
-	Programme Elective (1)			3	-
Year 3 – Semester 2 (18 Credit Hours)					
Course Code	Course Name	Lec	Lab/Tut	Credit	Prerequisite
BA161	Introduction to Entrepreneurship	3	-	3	-
CSC301	Numerical Analysis	3	1	3	CSC203
CSC302	Computational Theory	3	-	3	CSC215
CSC323	Visual Programming	2	2	3	CSC314+CSC221
CSC332	Data Communication and Computer Networks	2	2	3	CSC331
-	Programme Elective (2)			3	-
Year 4 – Semester 1 (15 Credit Hours)					
Course Code	Course Name	Lec	Lab/Tut	Credit	Prerequisite
CSC401	Algorithm Design and Analysis	3	-	3	CSC215
CSC402	Compilers Design	3	-	3	CSC302
CSC425	Graduation Project 1	-	6	3	CSC241+90 credit hours
CSC441	Internship	-	6	3	CSC321+90 credit hours
-	Programme Elective (3)			3	-
Year 4 – Semester 2 (15 Credit Hours)					
Course Code	Course Name	Lec	Lab/Tut	Credit	Prerequisite

CSC426	Graduation Project 2	-	6	3	CSC425
CSC435	Ciphering and Computer Security	3	-	3	CSC332
CSC436	Mobile Computing	2	2	3	CSC332
-	Programme Elective (4)			3	-
-	Programme Elective (5)			3	-

Programme Elective Courses – Group 1

Course Code	Course Name	Lec	Lab/Tut	Credit	Prerequisite
CSC204	Linear Algebra	3	1	3	CSC203
CSC305	Operations Research	3	-	3	CSC103
CSC326	Mobile Application Development	2	2	3	CSC322+CSC221
CSC327	Web Based Software Development II	2	2	3	CSC322+CSC221
CSC328	Human computer interaction	3	-	3	CSC222
CSC329	Multimedia Systems	2	2	3	CSC322
CSC421	Software Engineering II	2	2	3	CSC222

Programme Elective Courses – Group 2

Course Code	Course Name	Lec	Lab/Tut	Credit	Prerequisite
CSC312	Programming Language Concepts	3	-	3	CSC314
CSC315	Data Mining	2	2	3	CSC304
CSC343	Special Topics in Computer Science	3	-	3	DEPT. APPROVAL
CSC403	Image Processing	2	2	3	CSC401
CSC411	Computer Graphics	2	2	3	CSC401
CSC437	Cloud computing	2	2	3	CSC332
CSC438	Parallel and Distributed Computing	2	2	3	CSC332

University Compulsory Courses

Course Code	Course Name	Lec	Lab/Tut	Credit	Prerequisite
ARB101	Arabic Language	3	-	3	-
ENG111	Intermediate Upper English	3	-	3	-
ENG112	Advanced English	3	-	3	ENG111
CS104	Computer Skills	1	4	3	-
HBH105	Bahrain Civilization & History	3	-	3	-
HR 106	Human Right	3	-	3	-
BA161	Introduction to Entrepreneurship	3	-	3	-

University Elective Courses – Group 1

Course Code	Course Name	Lec	Lab/Tut	Credit	Prerequisite
ISL101	Islamic Culture	3	-	3	-
ISL102	Islamic Ethic	3	-	3	-
ISL103	Islam & Contemporary	3	-	3	-

University Elective Courses – Group 2

Course Code	Course Name	Lec	Lab/Tut	Credit	Prerequisite
LIB101	Introduction to Library Science	3	-	3	-
MAN101	Man and Environment	3	-	3	-
SOC101	Introduction to Sociology	3	-	3	-
SPT101	Special Subjects	3	-	3	-
CS205	Computer Application	3	-	3	CS104
LFS102	Developing thinking and communication skills	3	-	3	-