



Abdul Wali Khan University Mardan

Department of Computer Science

BSCS (Software) Program

(Curriculum)

Roadmap Semester-wise 4-Year Plan

Codes	Semester 1	Cr. Hrs.	Codes	Semester 2	Cr. Hrs.
CC-311	Introduction to Computing (Computing Core-I)	4(3+1)	GEC-322	Pakistan Studies (General Education Core-III)	2(2+0)
CC-312	Programming Fundamentals (Computing Core-II)	4(3+1)	CC-321	Object Oriented Programming (Computing Core-III)	4(3+1)
CSC-311	Calculus and Analytical Geometry (Computing Support Core I)	3(3+0)	CC-322	Discrete Structures (Computing Core-IV)	3(3+0)
GEC-312	Islamic Studies (General Education Core-I)	2(2+0)		----- (Computing Support Elective-I)	3(2+1)
GEC-311	English-I (Functional English) (General Education Core-II)	3(3+0)	GEC-321	English-II (Communicational Skills) (General Education Core-IV)	3(3+0)
	Total credit hour	16		Total credit hour	15
	Semester 3	Cr. Hrs.		Semester 4	Cr. Hrs.
CC-432	Introduction to Software Engineering (Computing Core-V)	3(3+0)	CC-441	Operating Systems (Computing Core-VIII)	4(3+1)
CC-433	Data Structures (Computing Core-VI)	4(3+1)	SC-442	Object Oriented analysis and design (Software Engg Core-I)	3(3+0)
CSC-431	Multivariable Calculus (Computing Support Core-II)	3(3+0)	CSC-441	Probability and Statistics (Computing Support Core-III)	3(3+0)
CC-434	Digital Logic and Design (Computing Core-VII)	4(3+1)	CC-444	Introduction to Database Systems (Computing Core-IX)	4(3+1)
GEC-431	English –III (Technical Report Writing) (General Education Core-V)	3(3+0)	CSC-442	Linear Algebra (Computing Support Core-IV)	3(3+0)
	Total credit hour	17		Total credit hour	17

	Semester 5	Cr. Hrs.		Semester 6	Cr. Hrs.
SC-551	Software Requirement Engineering (Software Engg Core-II)	3(3+0)	SC-561	Software Design and Architecture (Software Engg Core-II)	3(3+0)
	----- (Software Engg Elective-I)	3(3+0)		----- (Software Engg Elective-IV)	3(3+0)
CC-551	Data Communication and Networks (Computing Core-X)	3(2+1)	GEE-561	Psychology (General Education Elective-I)	3(3+0)
SC-552	Software Construction (Software Engg Core-III)	3(3+0)	SC-562	Software Verification and Validation (Software Engg Core-V)	3(3+0)
	----- (Software Engg Elective-II)	3(3+0)	CC-563	Analysis of Algorithm (Computing Core-XI)	3(3+0)
	----- (Software Engg Elective-III)	3(2+1)		----- (Software Engg Elective-V)	3(3+0)
	Total credit hour	18		Total credit hour	18
	Semester 7	Cr. Hrs.		Semester 8	Cr. Hrs.
	----- (General Education Elective-II)	3(3+0)		----- (Computing Support Elective-III)	3(3+0)
SC-671	Software Project Management (Software Engg Core-VII)	3(3+0)		----- (Software Engg Elective-VII)	3(3+0)
	----- (Software Engg Elective-VI)	3(3+0)		----- (Software Engg Elective-VIII)	3(3+0)
	----- (Computing Support Elective)	3(3+0)	CC-681	Final Year Project-II (Computing Core-XIII)	3(3+0)
	----- (General Education Elective-III)	3(3+0)		----- (General Education Elective-IV)	3(3+0)
CC-671	Final Year Project-I (Computing Core-XII)	3(3+0)			
	Total credit hour	18		Total credit hour	15