I Q R A UNIVERSITY IU

BACHELORS OF SCIENCE IN COMPUTER SCIENCE-BS(CS)

Structure of BS(CS) Program	Category: Courses (Credit Hours)
Total Credit Hours: 136 Total Courses: 44 Semesters: 8 Duration: 4 Years	General Education: 12 (30) Major courses: 18 (64) + 7 (21) Allied/interdisciplinary courses: 5 (15) Internship/field experience: N/A Capstone project: 2 (6) Total: 44 (136)

SCHEME OF STUDIES

S #	COURSE CODES	CLASS	COURSE TITLE	CREDIT HOURS	PRE-REQ	CO-REQ
SEMESTER 1						
1	CMC111	CORE	Programming Fundamentals	3 + 0	-	CMC111-L
	CMC111-L	CORE	Programming Fundamentals (Lab)	0 + 1		
2	GER111	GER	Application of Information & Communication Technologies	2 + 0	-	GER111-L
	GER111-L	GER	Application of Information & Communication Technologies (Lab)	0 + 1		
3	GER121	GER	Functional English	3 + 0	-	
4	GER131	GER	Calculus and Analytic Geometry	3 + 0	-	
5	**GER152**	**GER**	**Natural Science (Applied Physics)**	**2 + 0**	**-**	**GER152-L**
	GER152-L	**GER**	**Natural Science (Applied Physics (Lab))**	**0 + 1**		
				13+3 (16)		
SEMESTER 2						
1	MTE111	MATHS	Multivariable Calculus	3 + 0	GER131	
2	CMC112	CORE	Object Oriented Programming	3 + 0	CMC111	CMC112-L
	CMC112-L	CORE	Object Oriented Programming (Lab)	0 + 1	CMC111-L	
3	**CMC122**	**CORE**	**Digital Logic Design**	**2 + 0**	**GER152**	**CMC122-L**
	CMC122-L	**CORE**	**Digital Logic Design (Lab)**	**0 + 1**	**GER152-L**	
4	GER122	GER	Expository Writing	3 + 0	GER121	
5	GER132	GER	Discrete Structures	3 + 0	GER131	
6	GER142	GER	Ideology and Constitution of Pakistan	2 + 0	-	
				16+2 (18)		

		SEMESTER 3				
1	MTE212	MATHS	Probability & Statistics	3 + 0	MTE111	
2	CMC222	CORE	Computer Organization & Assembly Language	3 + 0	**CMC122**	CMC222-L
	CMC222-L	CORE	Computer Organization & Assembly Language (Lab)	0 + 1	**CMC122-L**	
3	CMC251	CORE	Data Structures	3 + 0	CMC112	CMC251-L
	CMC251-L	CORE	Data Structures (Lab)	0 + 1	CMC112-L	
4	CSC252	DOMAIN CORE	Theory of Automata	3 + 0	GER132	
5	CMC261	CORE	Computer Networks	3 + 0	**CMC122**	CMC261-L
	CMC261-L	CORE	Computer Networks (Lab)	0 + 1	**CMC122-L**	
				15+3 (18)		

		SEMESTER 4				
1	MTE213	MATH	Linear Algebra	3 + 0	MTE111	
2	MTE221	GER	Technical & Business Writing	3 + 0	GER122	
3	CSC223	DOMAIN CORE	Computer Architecture	2 + 0	CMC222	CSC223-L
	CSC223-L	DOMAIN CORE	Computer Architecture (Lab)	0 + 1	CMC222-L	
4	CMC241	CORE	Operating Systems	3 + 0	CMC251	CMC241-L
	CMC241-L	CORE	Operating Systems (Lab)	0 + 1	CMC251-L	
5	**CMC252**	CORE	Analysis of Algorithms	3 + 0	CMC251	
6	GERXXX	GER	Social Science I	2 + 0	GER122	
				16+2 (18)		

		SEMESTER 5				
1	CMC331	CORE	Database Systems	3 + 0	CMC241	CMC331-L
	CMC331-L	CORE	Database Systems (Lab)	0 + 1	CMC241-L	
2	CSC354	DOMAIN CORE	Compiler Construction	2 + 0	CSC252	CSC354-L
	CSC354-L	DOMAIN CORE	Compiler Construction (Lab)	0 + 1	CSC252-L	
3	CMC362	CORE	Information Security	3 + 0	CMC261	CMC362-L
	CMC362-L	CORE	Information Security (Lab)	0 + 1	CMC261-L	
4	CMC371	CORE	Software Engineering	3 + 0	**CMC252**	
5	CSEXXX	DOMAIN ELEC	Domain Elective 1	3 + 0	-	
				14+3 (17)		

		SEMESTER 6				
1	CSC332	DOMAIN CORE	Advance Database Management Systems	2 + 0	CMC331	CSC332-L
	CSC332-L	DOMAIN CORE	Advance Database Management Systems (Lab)	0 + 1	CMC331-L	
2	CMC381	CORE	Artificial Intelligence	3 + 0	**CMC252**/ CMC371	CMC381-L
	CMC381-L	CORE	Artificial Intelligence (Lab)	0 + 1	**CMC252**/ CMC371	
3	CSC382	DOMAIN CORE	HCI & Computer Graphics	2 + 0	CMC371	CSC382-L
	CSC382-L	DOMAIN CORE	HCI & Computer Graphics (Lab)	0 + 1	CMC371-L	
4	CSEXXX	DOMAIN ELEC	Domain Elective 2	2 + 1	-	
5	ESCXXX	GER	Social Science II	3 + 0	-	
6	**GER141**	**GER**	**Islamic Studies**	**2 + 0**	**-**	
				14+4(18)		

			SEMESTER 7			
1	CSC442	DOMAIN CORE	Parallel & Distributed Computing	3 + 0	CMC241/ CSC382	CSC442-L
	CSC442-L	DOMAIN CORE	Parallel & Distributed Computing (Lab)	0 + 1	CMC241-L/ CSC382-L	
2	GER462	GER	Technopreneurship	2 + 0	-	
3	CMC491	CORE	Final Year Project - I	0 + 3	CMC381	
4	CSEXXX	DOMAIN ELEC	Domain Elective 3	2 + 1	-	
5	CSEXXX	DOMAIN ELEC	Domain Elective 4	2 + 1	-	
6	CSEXXX	DOMAIN ELEC	Domain Elective 5	2 + 1	-	
				11+7(18)		
			SEMESTER 8			
1	GER443	GER	Civics and Community Engagement	2 + 0	-	
2	GER463	GER	Professional Practices	2 + 0	-	
3	CMC492	CORE	Final Year Project - II	0 + 3	CMC491	
4	CSEXXX	DOMAIN ELEC	Domain Elective 6	2 + 1	-	
5	CSEXXX	DOMAIN ELEC	Domain Elective 7	2 + 1	-	
				8+5(13)		
			TOTAL CREDIT HOURS	136		

**Campus will decide to offer a course.