IQRA UNIVERSITY IU

Bachelor of Science (Applied Computing) Program

Structure of the Program	**Category: Courses (Credit Hours)**
Total Credit Hours: 132	**General Education: 13 (32)**
Total Courses: 45	Major courses: 25 (79)
Semesters: 8	Allied/interdisciplinary courses: 4 (12)
Duration: 4 Years	Internship/field experience: 1 (3)
	Capstone project: 2 (6)
	Total: 45 (132)

SCHEME OF STUDIES

S #	COURSE CODES	CLASS	COURSE TITLE	CREDIT HOURS	PRE-REQ	CO-REQ
			SEMESTER 1			
1	**General Education**	GER111	Application of Information & Communication Technologies	2 + 1		
2	**General Education**	GER131	Calculus and Analytical Geometry	3 + 0		
3	**General Education**	GER121	Functional English	3 + 0		
4	**Computing Core**	CMC111	Programming Fundamentals	3 + 1		
5	**General Education**	GER141	Islamic Studies	2 + 0		
6	**General Education**	GER112	Pak Studies	2 + 0		
			Total Semester Credit Hours	**(15 + 2)**		
			SEMESTER 2			
1	Computing Core	CMC121	Digital Logic Design	2 + 1		
2	General Education	GER142	Ideology and Constitution of Pakistan	2 + 0	GER112	
3	General Education	GER151	Applied Physics	2 + 1		
4	General Education	GER122	Expository Writing	3 + 0	GER121	
5	Computing Core	CMC112	Object Oriented Programming	3 + 1	CMC111	
6	General Education	GER132	Discrete Structures	3 + 0		
			Total Semester Credit Hours	**(15 + 3)**		
			SEMESTER 3			
1	Computing Core	CMC251	Data Structures & Algorithms	3 + 1	CMC112	
2	Computing Core	CMC261	Computer Networks	2 + 1		
3	Computing Core	CMC222	Computer Organization & Assembly Language	2 + 1	CMC121	
4	General Education	GER261	Introduction to Management	2 + 0		
5	Mathematics Supporting	MTE221	Technical & Business Writing	3 + 0	GER122	

6	Mathematics Supporting	MTE111	Multivariate Calculus	3 + 0	GER131	
			Total Semester Credit Hours	**(15 + 3)**		
SEMESTER 4						
1	Computing Core	CMC331	Database Systems	3 + 1	CMC251	
2	Computing Core	CMC241	Operating Systems	2 + 1	CMC261	
3	Mathematics Supporting	MTE213	Linear Algebra and Differential Equations	3 + 0	MTE111	
4	Mathematics Supporting	MTE212	Probability and Statistics	3 + 0		
5	Computing Core	CMC371	Software Engineering	3 + 0		
			Total Semester Credit Hours	**(14 + 2)**		
SEMESTER 5						
1	Computing Core	CMC252	Analysis of Algorithms	3 + 0	CMC251	
2	Program Core	CSC383	Game Programming Languages	3 + 0	CMC112	
3	Program Core	CSC382	Human and Computer Interaction	2 + 1		
4	General Education	GER443	Civics and Community Management	2 + 0		
5	Specialization Elective	Elect	Specialization Elective I	2 + 1		
6	Specialization Elective	Elect	Specialization Elective II	2 + 1		
			Total Semester Credit Hours	**(14 + 3)**		
SEMESTER 6						
1	Program Core	CSC442	Parallel and Distributed Computing	3 + 0	CMC241	
2	Program Core	CSC 443	Data Analysis and Visualization	3 + 0	CMC252	
3	Computing Core	CMC381	Artificial Intelligence	2 + 1		
4	Specialization Elective	Elect	Specialization Elective III	2 + 1		
5	Specialization Elective	Elect	Specialization Elective IV	2 + 1		
6	Specialization Elective	Elect	Specialization Elective V	2 + 1		
			Total Semester Credit Hours	**(14 + 4)**		
SEMESTER 7						
1	Computing Core	CMC491	Final Year Project - I	0 + 2		
2	Computing Core	CMC362	Information Security	2 + 1		
3	Program Core	CSC423	Machine Learning	3 + 0	CMC381	
4	Specialization Elective	Elect	Specialization Elective VI	2 + 1		
5		BUS350	INTERNSHIP	3 + 0		
6	General Education	GER462	Entrepreneurship	2 + 0		
			Total Semester Credit Hours	**(12+ 4)**		
SEMESTER 8						
1	Computing Core	CMC492	Final Year Project - II	0 + 4	CMC491	

2	Specialization Elective	Elect	Specialization Elective VII	2 + 1		
3	General Education	GER463	Professional Practices	2 + 0		
4	Program Core	CSC432	Web Programming Languages	2 + 1		
			Total Semester Credit Hours	**(6 + 6)**		
				TOTAL CREDIT HOURS	**132**		

***Campus will decide to offer a course.*