

BCA/MCA Blockchain	Course	Semester (Final)	Credit	Module	Async. learning hours (Non Credit) Non Mandatory
Fundamentals of Programming	Java (OOP)	2nd Semester	5	Variables & Data Types	63
				Conditionals, Loops & Functions	
				Abstraction and Encapsulation	
				Inheritance & Polymorphism	
				Arrays & Linked Lists	
				Recursion & Basics	
	Algorithms	2nd Semester	5	Algorithm Analysis	105
				Searching & Sorting	
				Greedy Algorithms	
				Dynamic Programming	
	Data Structures	3rd Semester	5	Stacks & Queues	70
				Hash Tables & Hash Maps	
				Binary Trees & Binary Search Trees	
				Priority Queues & Heaps	
				Graphs and Graph Algorithms	
	Competitive Programming	4th Semester	4	Recursion	68
				Arrays and Array Lists	
				Strings	
				Stacks & Queues	
				Sets and Hash Tables	
				Binary Trees & Binary Search Trees	
				Priority Queues & Heaps	
	Graphs and Graph Algorithms				

Blockchain Specialisation	1. Introduction to cryptography	3rd Semester	5	History of Cryptography	4
				Crypto Primitives	13
				Asymmetric Cryptosystem	14
				Hashing Deep-dive	8
				PKI	12
				Zero Knowledge Protocols	18
	2. Basics of blockchain	4th Semester	5	Evolution of Block-chain	10
				Basic Elements of Block-chain	14
				Types of Block-chains	12
				Consensus models	12
				Working of Block-chain	9
	Benefits of Block-chain	9			
	3. Applications of Blockchain- Cryptocurrencies	5th Semester	4	Bitcoin and Ethereum Block-chain	25
				Consensus Mechanics and Mining Pool	9
				Contracts	9
				EVM	6
4. Smart Contract Development	5th Semester	5	Basics of Smart Contracts	8	
			Setting up Development Environment	27	
			Solidity Deep-dive	34	
Total Credits			38	559	