

B.Tech Block chain	Course	Proposed Semester	Lecture + Practical Credit	Module	Async learning hours (Non Credit) Non Mandatory
<b>Fundamentals of Programming</b>	Java (OOP)	2nd Sem	5	Variables & Data types	63
				Conditionals, Loops & Functions	
				Abstraction and Encapsulation	
				Inheritance & Polymorphism	
				Arrays & Linked Lists	
				Recursion & Basics	
	Data Structures	3rd Sem	5	Algorithm Analysis	105
				Searching & Sorting	
				Greedy Algorithms	
				Dynamic Programming	
	Algorithms	5th Sem	5	Stacks & Queues	70
				Hash tables & Hash maps	
				Binary Trees & Binary Search Trees	
				Priority Queues & Heaps	
				Graphs and Graph Algorithms	
	Competitive Programming	4th Sem	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					

## Block chain Specialisation

1. Introduction to cryptography	2nd Sem	5	History of Cryptography	4	69
			Crypto Primitives	13	
			Asymmetric Cryptosystem	14	
			Hashing Deep dive	8	
			PKI	12	
			Zero Knowledge Protocols	18	
2. Basics of blockchain	3rd Sem	5	Evolution of Blockchain	10	66
			Basic Elements of Blockchain	14	
			Types of Blockchains	12	
			Consensus models	12	
			Working of blockchain	9	
			Benefits of Blockchain	9	
3. Applications of Blockchain- Crypto currencies	4th Sem	4	Bitcoin and Ethereum Blockchain	25	49
			Consensus Mechanics and Mining Pool	9	
			Contracts	9	
			EVM	6	
4. Smart Contract Development	5th Sem	5	Basics of Smart Contracts	8	69
			Setting up Development Environment	27	
			Solidity Deep dive	34	
5. Basics of Finance	5th Sem	6	Money Basics	8	72
			Introduction to Accounting	18	
			Financial Instruments	19	
			Nature and Behaviour of Exchanges	18	
			Market Structures	9	
	6th Sem	5	Introduction to DeFi	6	63

	6. Decentralised Finance			Automated Market Maker	14	67
				Stable Coin	16	
				Oracles and Prediction Markets	7	
				Crypto Money Markets	12	
				DAOs	8	
	7. Next Generation Blockchains	6th Sem	5	Solana	15	
				Cosmos Ecosystem	11	
				Hyper-ledger	14	
				Polkadot	10	
				Ethereum Layer II	17	
<b>Total</b>			54		761	