



## Program Structure

<b>Program Name</b>	Certificate Course in Block chain and Cryptocurrency Analyst
<b>Proposed Program Duration</b>	250 hours
<b>Overview of program</b>	<ul style="list-style-type: none"> <li>• <b>Industry Sector</b> – This course will help to learn the fundamentals of the Blockchain platform. Creating one’s own private Blockchain, and secure a digital asset using Blockchain identity. It also helps Exploring the Ethereum platform, and use Solidity and smart contracts to develop one’s own decentralized app.</li> </ul> <p>This course also covers the fundamentals of the Cryptocurrency. It will help to understand the concept and use of bitcoin for conducting financial transactions and how it can be carried out. The course would help to understand the networking aspects of Cryptocurrency transaction.</p> <ul style="list-style-type: none"> <li>• <b>Skills acquired includes</b> – Generic: Technical communication, Technical: System handling, troubleshooting, Professional: Organizing skills.</li> </ul>
<b>Program Objectives</b>	<ol style="list-style-type: none"> <li>1. Understand the Concept of Blockchain</li> <li>2. Understanding the concept and working of Ethereum and Hyperledger.</li> <li>3. Using various tools and platforms used for developing Blockchain.</li> <li>4. Explain cryptographic building blocks and reason about their security</li> <li>5. Define Bitcoin's consensus mechanism</li> <li>6. Understand how security comes from a combination of technical methods and clever incentive engineering             <ol style="list-style-type: none"> <li>a. Learn how the individual components of the Bitcoin protocol make the whole system works: transactions, script, blocks, and peer-to-peer network</li> </ol> </li> <li>7. Understand how to use Bitcoins and learn ways of storing Bitcoin keys</li> <li>8. Learn various security measures, and types of services that allow people to trade and transact with Bitcoins</li> </ol>
<b>Target group of learners</b>	<ul style="list-style-type: none"> <li>• B.E./ B. Tech (with fundamental knowledge of programming)</li> <li>• Diploma (Computer Science/Computer Application)</li> </ul>



	<ul style="list-style-type: none"> <li>• B.Sc. in Computer Science, Science (basic programming skills)</li> </ul>			
<b>Entrance Exam test format</b>	Time : 1 hour			
	No of Questions: 50			
	Exam Type: Multiple Choice questions			
	Aptitude: 15 marks			
	Basics of Computers: 20 marks			
	Logical thinking: 15 marks			
<b>Job Role</b>	Blockchain Developer, Crypto Analyst			
<b>Learning Outcomes</b>	<p><b>After completing this programme, participants will be able to:</b></p> <ul style="list-style-type: none"> <li>• Learn use of various tools and platforms used in Blockchain Development</li> <li>• Understand the concept of Blockchain, Ethereum and Hyperledger</li> <li>• Build Blockchain using various hyperledger tools</li> <li>• Understand and write codes using solidity programing for smart contract.</li> <li>• Understand the concepts of cryptocurrency and bitcoining.</li> <li>• Understand the various mechanics of bitcoin transaction.</li> <li>• Understand how bitcoin can be used for financial transaction and trading</li> </ul>			
<b>Curriculum and Pedagogy</b>	<b>Module</b>	<b>Elements</b>	<b>TH</b>	<b>PR/ S</b>
	BC101	Introduction to Blockchain	8	14
	BC102	Ethereum and Smart contract Development	10	25
	BC103	Blockchain development in Hyperledger using tools	10	25
	BC104	Introduction to Crypto and Cryptocurrencies	8	15
	BC105	How Bitcoin Achieves Decentralization	10	20
	BC106	Mechanics of Bitcoin	10	20
	BC107	Using and Storing Bitcoin	10	20
	BC108	Professional Skills	0	30
		Examination	5	10
	<b>Total</b>		71	179