

# Nallamuthu Gounder Mahalingam College

Department of Information Technology  
(2020-2021)

## Basics of Block Chain Architecture

### Course Content

- Economics Behind Block chain
- Crypto currency
- Digital signature
- Bitcoin
- Block Mining

### Objectives

- Understand what blockchain is.
- Know different types of blockchain.
- Learn about smart contracts.
- See how blockchain stays secure.
- Understand real-life uses of blockchain.

### Evaluation

- PART A: MCQ
- PART B: One word (definition)
- PART C: Detailed an Explanation

DURATION 30  
HOURS

|                                  |                        |                                 |                                    |     |
|----------------------------------|------------------------|---------------------------------|------------------------------------|-----|
| <b>Programme Code:</b>           | UIT                    | <b>Programme Title:</b>         | Bachelor of Information Technology |     |
| <b>Course Code:</b><br>19UITVA01 | Value Added Course - 1 | <b>Title</b>                    | <b>Batch:</b>                      | Any |
|                                  |                        | <b>Block Chain Architecture</b> | <b>Semester:</b>                   | VI  |
| <b>Hrs/Week:</b>                 | 2                      |                                 | <b>Credits:</b>                    |     |

| Units           | Content                                                                                                                                                                                                                                                                                                                                                                                          | Hrs       |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <b>Unit I</b>   | Block Chain – Introduction – Problems with centralized System – Overview – Fundamentals. Bitcoin- Introduction – Transaction life cycle - Block chain2.0 – Smart Contracts. Block in Block chain Architecture - Distributed Consensus - Economics behind Block Chain Consensus.                                                                                                                  | 10        |
| <b>Unit II</b>  | The Chain and the Longest chain – Cryptocurrency to Block chain 2.0 – Permissioned model of Block chain. Cryptographic hash function – Properties – Hash pointer and Merkle tree.                                                                                                                                                                                                                | 8         |
| <b>Unit III</b> | Digital Signature - Public Key Cryptography - A basic cryptocurrency - Creation of coins - Payments and double spending - FORTH – the precursor for Bitcoin scripting - Bitcoin Scripts - Bitcoin P2P Network - Transaction in Bitcoin Network - Block Mining - Block propagation and block relay - Why Consensus - Distributed consensus in open environments - Consensus in a Bitcoin network. | 12        |
|                 | <b>Total Contact Hrs</b> * self study                                                                                                                                                                                                                                                                                                                                                            | <b>30</b> |

  
 Principal  
 PRINCIPAL  
 N G M COLLEGE, POLLACHI



# NALLAMUTHU GOUNDER MAHALINGAM COLLEGE (AUTONOMOUS)

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## VALUE ADDED COURSE VALUE ADDED COURSE



This is to certify that Ms. ARCHANA.S (19-IT-29), **Department of B.Sc (IT)**, of  
Nallamuthu Gounder Mahalingam College (Autonomous), Pollachi, has successfully completed  
Value Added Course entitled **BLOCK CHAIN ARCHITECTURE** during Feb 2021 to May 2021.

**HOD**

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## VALUE ADDED COURSE VALUE ADDED COURSE



This is to certify that Mr. ARUNRAJA (19-IT-02), **Department of B.Sc (IT)**, of Nallamuthu Gounder Mahalingam College (Autonomous), Pollachi, has successfully completed Value Added Course entitled **BLOCK CHAIN ARCHITECTURE** during Feb 2021 to May 2021.

Handwritten signature of the Head of Department (HOD) in black ink.

**HOD**

Handwritten signature of the Principal in black ink.

**Principal**



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## VALUE ADDED COURSE VALUE ADDED COURSE



This is to certify that Ms. BAVATHARANI. V (18-IT-24), **Department of B.Sc (IT)**,  
of Nallamuthu Gounder Mahalingam College (Autonomous), Pollachi, has successfully completed  
Value Added Course entitled **BLOCK CHAIN ARCHITECTURE** during Feb 2021 to May 2021.

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This is to certify that Ms. DIVYA.M (18-IT-28), **Department of B.Sc (IT)**, of  
Nallamuthu Gounder Mahalingam College (Autonomous), Pollachi, has successfully completed  
Value Added Course entitled **BLOCK CHAIN ARCHITECTURE** during Feb 2021 to May 2021.

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This is to certify that Ms. MRIDHULA.T (20-IT-39), **Department of B.Sc (IT)**, of  
Nallamuthu Gounder Mahalingam College (Autonomous), Pollachi, has successfully completed  
Value Added Course entitled **BLOCK CHAIN ARCHITECTURE** during Feb 2021 to May 2021.

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This is to certify that Ms. PRATHIKSHA.M (19-IT-46), **Department of B.Sc (IT)**, of  
Nallamuthu Gounder Mahalingam College (Autonomous), Pollachi, has successfully completed  
Value Added Course entitled **BLOCK CHAIN ARCHITECTURE** during Feb 2021 to May 2021.

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This is to certify that Mr. SANDHIYA.S (19-IT-50), **Department of B.Sc (IT)**, of Nallamuthu Gounder Mahalingam College (Autonomous), Pollachi, has successfully completed Value Added Course entitled **BLOCK CHAIN ARCHITECTURE** during Feb 2021 to May 2021.

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This is to certify that Ms. SHALINIPRIYA.S (19-IT-52), **Department of B.Sc (IT)**, of  
Nallamuthu Gounder Mahalingam College (Autonomous), Pollachi, has successfully completed  
Value Added Course entitled **BLOCK CHAIN ARCHITECTURE** during Feb 2021 to May 2021.

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## VALUE ADDED COURSE VALUE ADDED COURSE



This is to certify that Ms . SINDHUJA.V.T (20-IT-47), **Department of B.Sc (IT)**, of  
Nallamuthu Gounder Mahalingam College (Autonomous), Pollachi, has successfully completed  
Value Added Course entitled **BLOCK CHAIN ARCHITECTURE** during Feb 2021 to May 2021.

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## VALUE ADDED COURSE VALUE ADDED COURSE

### *Certificate of Completion*

This is to certify that Mr. VENKATESHPRABHU.V (19-IT-23), **Department of B.Sc (IT)**, of Nallamuthu Gounder Mahalingam College (Autonomous), Pollachi, has successfully completed Value Added Course entitled **BLOCK CHAIN ARCHITECTURE** during Feb 2021 to May 2021.

**HOD**

**Principal**

