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| **PROGRAM** | **Master of Business Administration** |
| **SEMESTER** | **IV** |
| **COURSE TITLE** | **Blockchain Technology** |
| **COURSE CODE** | **04MB0451** |
| **COURSE CREDITS** | **2** |
| **COURSE DURATION** | **28 lectures** |

**COURSE OUTCOMES:**

* Students will have knowledge of concepts of Blockchain and its types.
* Students will understand the concept of decentralization and smart contracts and its usage in Blockchain. Also they will have knowledge of usage of cryptography concepts in Blockchain.
* Students will have knowledge of two Blockchain development frameworks namely Ethereum and Hyperledger
* Students will get the idea about Blockchain applications domains and Challenges in Blockchain implementation

**COURSE CONTENTS:**

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| **Unit No** | **Unit / Sub Unit** | **Sessions** |
| **I** | **Introduction**  Blockchain 101, Distributed systems, History of Blockchain, Introduction to Blockchain, Types of Blockchain, Benefits and limitations of Blockchain | 8 |
| **II** | **Decentralization, Smart contracts and cryptography foundation**  Decentralization, Decentralization using Blockchain, Methods of decentralization, Smart contracts,  Symmetric and Asymmetric key cryptography, Public and private keys, Hash functions | 10 |
| **III** | **Ethereum and Hyperledger**  Ethereum blockchain, Elements of Ethereum blockchain, Hyperledger, Projects Hyperledger as a protocol | 5 |
| **IV** | **Blockchain Application domains and Challenges**  IoT, Government, Health, Finance, Media  Challenges : Scalability, Security and Privacy | 5 |

**EVALUATION:**

The students will be evaluated on a continuous basis and broadly follow the scheme given below:

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|  | **Component** | **Weightage** |
| A | Continuous Evaluation Component (Assignments / Presentations/ Quizzes / Class Participation/ etc.) | 0% (C.E.C.) |
| B | Internal Assessment | 50% (I.A.) |
| C | End-Semester Examination | 50% (External Assessment) |

**SUGGESTED READINGS:**

**Text Books:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sr. No** | **Author/s** | **Name of the Book** | **Publisher** | **Edition and Year** |
| **T-01** | Imran Bashir | Mastering Blockchain: Deeper insight into decentralization, cryptography, Bitcoin and popular Blockchain frameworks | Packt | 2017 |

**Reference Books:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sr. No** | **Author/s** | **Name of the Book** | **Publisher** | **Edition and Year** |
| R-01 | Daniel Drescher | BlockChain Basics | Apress | 1st edition, 2017 |
| R-02 | Arvind Narayanan, Joseph Bonneau, Edward Felten, Andrew Miller, and Steven Goldfeder | Bitcoin and cryptocurrency technologies: a comprehensive introduction | Princeton University Press | 2016 |
| R-03 | Manav Gupta | Blockchain for Dummies | Wiley | 2017 |