

HAJEE KARUTHA ROWTHER HOWDIA COLLEGE

(An Autonomous Institution Affiliated to Madurai Kamaraj University, Madurai.)

Re-Accredited with A++ Grade by NAAC (3rd Cycle)

Uthamapalayam - 625 533.



DEPARTMENT OF INFORMATION **TECHNOLOGY**

MASTER OF SCIENCE – COMPUTER SCIENCE

PART IV-SYLLABUS

Choice Based Credit System – CBCS

(As per TANSICHE)

With

Outcome Based Education (OBE)

(Academic Year 2023 -2025)

Semester - II

Course Category	Course Code	Course Title	Hrs	CIAE	TEE	Max Marks	Credits
Part – IV	23PCSSE2P	Data Mining Lab using R	4	40	60	100	2

Semester - III

Course Category	Course Code	Course Title	Hrs	CIAE	TEE	Max Marks	Credits
Part – IV	23PCSSE3P	Cloud Computing Lab	4	40	60	100	2
	23PCSIS31	Internship Industrial Activity	-	-	-	-	2

Semester - IV

Course Category	Course Code	Course Title	Hrs	CIAE	TEE	Max Marks	Credits
Part – IV	23PCSSE41	Blockchain Technology	4	25	75	100	2

1.	https://www.javatpoint.com/data-warehouse
2.	https://nptel.ac.in/noc/courses/noc20/SEM1/noc20-cs12/
3.	https://www.btechguru.com/training--it--database-management-systems--file-structures--introduction-to-data-warehousing-and-olap-2-video-lecture--12054--26--151.html

Mapping with Programme Outcomes:

CO /PO	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	3	3	3	3	3
CO 2	3	3	3	2	3
CO 3	3	3	2	3	2
CO 4	3	3	3	3	3
CO 5	3	3	2	3	2

Strong-3 Medium-2 Low-1

Level of Correlation between PSO's and CO's

CO /PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	3	3	3
CO2	3	3	3	2	3
CO3	3	3	2	2	1
CO4	3	2	3	2	2
CO5	3	3	2	3	1

Strong-3 Medium-2 Low-1

Mapping with Programme Outcomes:

CO /PO	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	3	2	3	3	3
CO 2	1	2	3	3	2
CO 3	2	3	2	2	3
CO 4	3	1	3	3	3
CO 5	1	3	3	3	3

Strong-3 Medium-2 Low-1

Level of Correlation between PSO's and CO's

CO /PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	3	1	3
CO2	1	2	1	3	3
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CO4	2	3	3	2	3
CO5	3	2	3	3	3

Strong-3 Medium-2 Low-1

Course Code	Course Title	Category	Credits	Hours	Marks		
					CIAE	TEE	Total
23PCSSE41	BLOCKCHAIN TECHNOLOGY	Elective	2	4	25	75	100

Learning Objectives		
L1	Understand the fundamentals of block chain and cryptocurrency.	
L2	Understand the influence and role of block chain in various other fields.	
L3	Learn security features and its significance.	
L4	Identify problems & challenges posed by Block Chain.	
UNIT	Contents	No. of Hours
I	INTRODUCTION Introduction to Block chain - The big picture of the industry – size, growth, structure, players. Bitcoin versus Cryptocurrencies versus Block chain - Distributed Ledger Technology (DLT). Strategic analysis of the space – Block chain platforms, regulators, application providers. The major application: currency, identity, chain of custody.	12
II	NETWORK AND SECURITY Advantage over conventional distributed database, Block chain Network, Mining Mechanism, Distributed Consensus, Block chain 1.0, 2.0 and 3.0 – transition, advancements and features. Privacy, Security issues in Block chain.	12
III	CRYPTOCURRENCY Cryptocurrency - History, Distributed Ledger, Bitcoin protocols - Symmetric-key cryptography - Public-key cryptography - Digital Signatures -High and Low trust societies - Types of Trust model: Peer-to-Peer, Leviathan, and Intermediary. Application of Cryptography to Block chain.	12
IV	CRYPTOCURRENCY REGULATION Crypto currency Regulation – Stake holders, Roots of Bitcoin, Legal views – exchange of crypto currency – Black Market –Global Economy. Crypto economics – assets, supply and demand, inflation and deflation – Regulation.	12
V	CHALLENGES IN BLOCK CHAIN Opportunities and challenges in Block Chain – Application of block chain: Industry 4.0 – machine to machine communication –Data management in industry 4.0–future prospects. Block chain in Health 4.0 – Block chain properties - Healthcare Costs - Healthcare Quality - Healthcare Value - Challenges for using block chain for healthcare data.	10
VI	CONTEMPORARY ISSUES Expert lectures, online seminars –webinars	2
	Total	60
Course Outcomes		Knowledge Level
CO	On completion of this course, students will	
1	Demonstrate block chain technology and crypto currency	K1,K2,K3,K4,K5

2	Understand the mining mechanism in block chain	K1,K2,K3,K4,K5
3	Apply and identify security measures, and various types of services that allow people to trade and transact with bitcoins	K1,K2,K3,K4,K5,K6
4	Apply and analyze Block chain in health care industry	K1,K2,K3,K4,K5,K6
5	Analyze security, privacy, and efficiency of a given Block chain system	K1,K2,K3,K4,K5,K6
Textbooks		
1.	Arvind Narayanan, Joseph Bonneau, Edward Felten, Andrew Miller and Steven Goldfeder, “Bitcoin and Cryptocurrency Technologies: A Comprehensive Introduction”, Princeton University Press (July 19, 2016).	
2.	Antonopoulos,“MasteringBitcoin:UnlockingDigitalCryptocurrencies”	
Reference Books		
1.	Satoshi Nakamoto,“Bitcoin: A Peer-to-Peer Electronic Cash System”	
2.	RodrigodaRosaRighi,AntonioMarcosAlberti,MadhusudanSingh,“Blockchain Technology for Industry 4.0” Springer 2020.	
Web Resources		
1.	https://www.javatpoint.com/blockchain-tutorial	
2.	https://www.tutorialspoint.com/blockchain/index.htm	
3.	https://nptel.ac.in/noc/courses/noc20/SEM1/noc20-cs01/	

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