

# FOUNDATIONS OF BLOCKCHAIN



## MALLAREDDY ENGINEERING COLLEGE

(Autonomous)

Maisammaguda(H),  
Gundlapochampally Village, Medchal Mandal, Medchal-  
Malkajgiri District, Telangana State – 500100

### CIRCULAR

Date: 10/03/2021

All the 2<sup>nd</sup>/II Year/Sem students are hereby informed that the Malla Reddy Engineering College (Autonomous) is planning to organize Value Added Courses like Industrial Robotics, Multimedia - 2D Basic Concepts, Green Matte Studio - Video Effects/Transitions, Different Technologies of Additive Manufacturing, PYTHON With DJANGO, Foundations Of Blockchain, Labview in Centre Of Excellence. In this regard Interested students are hereby directed to register for these Courses in online or before 15/03/2021. For further details, please contact Centre of Excellence, MREC(A)

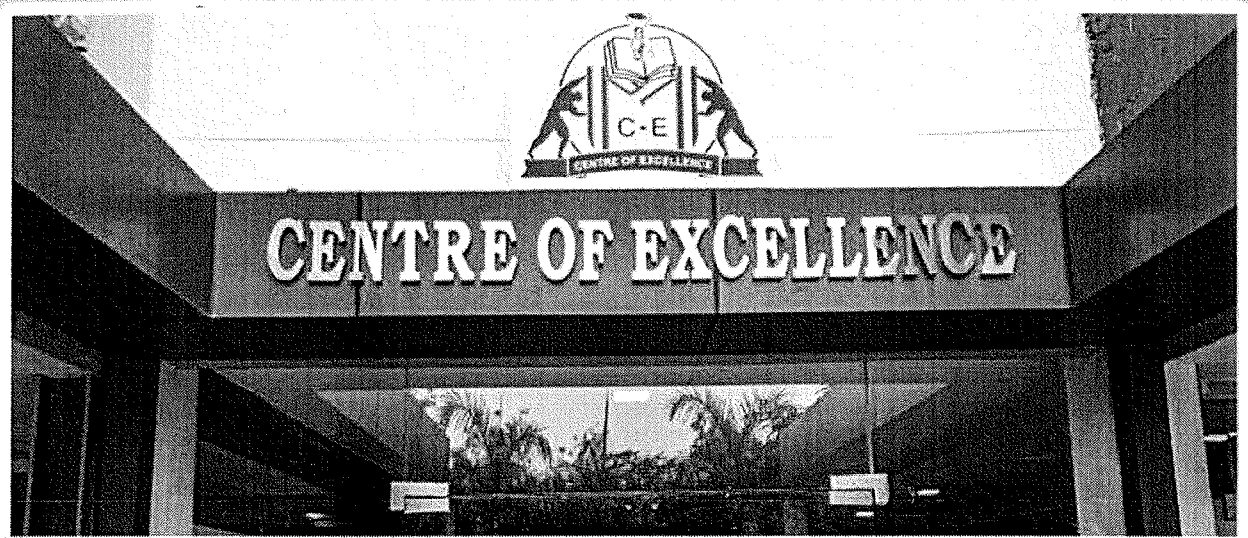
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2. To be displayed in all notice board
3. Controller of Examination
4. Confidential Section Exam Branch
5. Group Admin Officer
6. Library
7. Physical Director-for necessary action
8. Security Officer-for necessary action
9. Transport Manager-for necessary action
10. TEQIP Coordinator & Academic Cell
11. Admin Office
12. System Admin
13. Placement Cell
14. PA to Principal for Filing

  
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**Malla Reddy Engineering College**  
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**Maisammaguda, Dhulapally,**  
**(Post Via Kompally), Sec'bad-500 100**



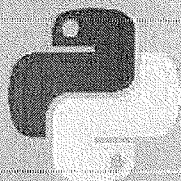
**MALLA REDDY ENGINEERING COLLEGE**  
**MAIN CAMPUS, AUTONOMOUS INSTITUTION**  
Maisammaguda, Dhulapally (Post) via Kompally,  
Secunderabad-500100 Medchal - Malkajgiri District Telangana, India



## **COMPUTER SOFTWARE**

**HTML ,PYTHON WITH DJANGO ,JAVA ,  
SCRATCH PROGRAMMING**

**LAB VIEW, FOUNDATION OF BLOCK CHAIN,  
MATLAB, BLOCK CHAIN REVOLUTION, MATLAB PRO,  
ADVANCE JAVA, ADVANCE PYTHON.**



python



Java

**Course Duration -: 4 Months**

**Before Software can be Reusable**

**it First has to be Usable.**





**MALLA REDDY ENGINEERING COLLEGE**  
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**CENTRE OF EXCELLENCE**

**Fundamentals of Blockchain Technology**

**Course Code: CFEC05**

**Duration: 32 Hours**

**Course Objective:** Blockchain course covers Introduction of Cryptography and Blockchain, BitCoin and Cryptocurrency, Introduction to Ethereum, Introduction to Hyperledger, Solidity Programming, Blockchain Applications

**Syllabus**

**UNIT-I:**

**6 Hours**

Introduction of Cryptography and Blockchain:

What is Blockchain, Blockchain Technology Mechanisms & Networks, Blockchain Origins, Objective of Blockchain, Blockchain Challenges, Transactions And Blocks, P2P Systems, Keys As Identity, Digital Signatures, Hashing, and public key cryptosystems, private vs. public Blockchain

**UNIT-II:**

**6 Hours**

BitCoin and Cryptocurrency:

What is Bitcoin, The Bitcoin Network, The Bitcoin Mining Process, Mining Developments, Bitcoin Wallets, Decentralization and Hard Forks, Ethereum Virtual Machine (EVM), Merkle Tree, Double-Spend Problem, Blockchain And Digital Currency, Transactional Blocks, Impact Of Blockchain Technology On Cryptocurrency.

**UNIT-III:**

**7 Hours**

**Introduction to Ethereum:**

What is Ethereum, Introduction to Ethereum, Consensus Mechanisms, How Smart Contracts Work, Metamask Setup, Ethereum Accounts, Receiving Ether's What's a Transaction?, Smart Contracts.

**Introduction to Hyperledger:**

What is Hyperledger? Distributed Ledger Technology & its Challenges, Hyperledger & Distributed Ledger Technology, Hyperledger Fabric, Hyperledger Composer

**UNIT-IV:**

**6 Hours**

Solidity Programming:

Solidity - Language of Smart Contracts, Installing Solidity & Ethereum Wallet, Basics of Solidity, Layout of a Solidity Source File & Structure of Smart Contracts, General Value Types (Int, Real, String, Bytes, Arrays, Mapping, Enum, address

**UNIT-V:**

**7 Hours**

Blockchain Applications:

Internet of Things, Medical Record Management System, Domain Name Service and Future of Blockchain, Alt Coins

**Course Outcomes:** This course covers in detail the technical principles & concepts behind blockchain technology. In

addition, it seeks to provide student with the insights and deep understanding of the various components of blockchain technology, and enables student to determine for yourself how to best leverage and exploit blockchain for your project, organization or start-up.

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Telangana State - 500100

Course:- FOUNDATIONS OF  
BLOCKCHAIN

Date:12/03/2021 TO  
14/07/2021

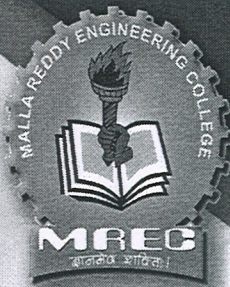
Enrolled Students

SL.No	Roll No	NAME	BRANCH
1.	19J41A0150	SATKURI MADHU	CE
2.	19J41A0151	SEELAM MOHITH REDDY	CE
3.	19J41A0152	SHUBHAM PRABHARI	CE
4.	19J41A0153	SOMI REDDY VENKATA RAMANA REDDY	CE
5.	19J41A0154	TAGARAM MANOJ DAS	CE
6.	19J41A0155	TAMMISSETTI HIMAVAMSI	CE
7.	19J41A0156	THAMMISSETTY NAVEEN	CE
8.	19J41A0157	THATI MADHUSAI	CE
9.	19J41A1249	PRAVEEN KUMAR KASAGALLA	IT
10.	19J41A1250	S KAILASH	IT
11.	19J41A1251	SAMALLA RAMTEJA	IT
12.	19J41A1252	SARASANI NAKUL REDDY	IT
13.	19J41A1253	SIRIGADA RAJITHA	IT
14.	19J41A1254	THIPPANI BHAVANI	IT
15.	19J41A1255	THOTA PRAVALLIKA	IT
16.	19J41A1256	VALLAPU HIMA BINDHU	IT
17.	19J41A0456	SRIJA V S L VULAPALLI	EEE
18.	19J41A0457	SUKASHI ANILKUMAR	EEE
19.	19J41A0458	VALUPADASU REVANTH	EEE
20.	19J41A0459	VELIGINTI KRISHNA TEJA REDDY	EEE
21.	19J41A0460	YELLA SHIRISHA	EEE
22.	19J41A0461	A SAI SHIVANI	EEE
23.	19J41A0462	AKKAPELLY UDAY KIRAN	EEE
24.	19J41A0463	AMARAVADI MOUNIKA	EEE
25.	19J41A0464	ARIGELA PRASANNA KUMAR	EEE
26.	19J41A2532	REGULAGADDA PRAVEEN KUMAR	ME
27.	19J41A2533	SALINDRA VARSHITH	ME
28.	19J41A2534	SANIKOMMU AVINASH REDDY	ME
29.	19J41A2535	SANTI SRI PUNITH	ME
30.	19J41A2536	SHAIK ARIF	ME
31.	19J41A2537	THATIKAYALA RAKESH	ME
32.	19J41A2538	VATTIKUTI SHASHI KIRAN	ME
33.	19J41A2539	VELPULA VEDA VYAS	MINING
34.	19J41A0456	SRIJA V S L VULAPALLI	ECE
35.	19J41A0457	SUKASHI ANILKUMAR	ECE
36.	19J41A0458	VALUPADASU REVANTH	ECE
37.	19J41A0459	VELIGINTI KRISHNA TEJA REDDY	ECE
38.	19J41A0460	YELLA SHIRISHA	ECE
39.	19J41A0461	A SAI SHIVANI	ECE
40.	19J41A0462	AKKAPELLY UDAY KIRAN	ECE
41.	19J41A0454	SHIKA SAHANA JYOTHI	ECE
42.	19J41A0455	SOUDARAPU NITHIN CHARY	ECE
43.	19J41A2524	MACHARLA PRASHANTH	MINING
44.	19J41A0463	AMARAVADI MOUNIKA	ECE
45.	19J41A0464	ARIGELA PRASANNA KUMAR	ECE
46.	19J41A2533	SALINDRA VARSHITH	MINING

47.	19J41A2534	SANIKOMMU AVINASH REDDY	MINING
48.	19J41A2535	SANTI SRI PUNITH	MINING
49.	19J41A2536	SHAIK ARIF	MINING
50.	19J41A2537	THATIKAYALA RAKESH	MINING
51.	19J41A2538	VATTIKUTI SHASHI KIRAN	MINING
52.	19J41A2539	VELPULA VEDA VYAS	MINING
53.	19J41A0527	K KOMALIKA	CSE
54.	19J41A0563	AKITI SWETHA REDDY	CSE
55.	19J41A0564	ALLAM YASHWANTH	CSE
56.	19J41A0565	AMBADIPELLI RAJKUMAR	CSE
57.	19J41A0566	AMBALA PAVAN	CSE
58.	19J41A0567	ANNE MANU PRIYATHAM CHAND	CSE
59.	19J41A0568	ANUMULA RUTHIK REDDY	CSE
60.	19J41A0569	BASANI RISHIKA	CSE

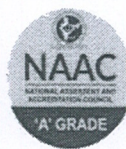
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# MALLA REDDY ENGINEERING COLLEGE

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# CERTIFICATE

OF COURSE COMPLETION

*This is to Certify that*

**SHUBHAM PRABHARI**

*has Successfully Completed Fundamentals of Blockchain Technologies  
Course offered by Centre of Excellence,*

*MREC(A) on 01/02/2021 bearing with*

*Roll No. 19J41A0152 and Branch CE.*

**N. RISHIKANTH  
DEAN (COE)**

**Dr.A.Ravendra  
Principal**

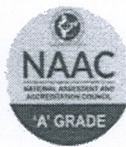
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*This is to Certify that*

**SANTI SRI PUNITH**

*has Successfully Completed Fundamentals of Blockchain Technologies*

*Course offered by Centre of Excellence,*

*MREC(A) on 01/02/2021 bearing with*

*Roll No. 19J41A2535 and Branch ME.*

**N. RISHIKANTH  
DEAN (COE)**

**Dr. A. Ravendra  
Principal**

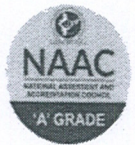
*Ravendra*  
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*This is to Certify that*

**VALLAPU HIMA BINDHU**

*has Successfully Completed Fundamentals of Blockchain Technologies  
Course offered by Centre of Excellence,*

*MREC(A) on 01/02/2021 bearing with*

*Roll No. 19J41A1256 and Branch IT.*

**N. RISHIKANTH  
DEAN (COE)**

**Dr. A. Ravendra  
Principal**

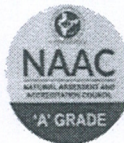
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*This is to Certify that*

**AMARAVADI MOUNIKA**

*has Successfully Completed Fundamentals of Blockchain Technologies  
Course offered by Centre of Excellence,*

*MREC(A) on 01/02/2021 bearing with  
Roll No. 19J41A0463 and Branch EEE.*

**N. RISHIKANTH  
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**Dr. A. Ravendra  
Principal**

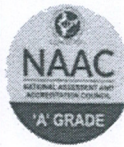
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*This is to Certify that*

**AMBADIPELLI RAJKUMAR**

*has Successfully Completed Fundamentals of Blockchain Technologies*

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*MREC(A) on 01/02/2021 bearing with*

*Roll No. 19J41A0565 and Branch CSE.*

**N. RISHIKANTH  
DEAN (COE)**

**Dr. A. Ravendra  
Principal**

*Ravend*  
**PRINCIPAL**  
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