Lesson Plan

STAFF NAME : Dr.Anil Kumar K M   SEMESTER:V   SECTION :
SUBJECT CODE: CS562   SUBJECT NAME : Blockchain Technology
DEPARTMENT: Computer Science and Engineering   NO. OF SCHEDULED CLASSES: 3

Session/ Hour	Topics to be covered
1	**Blockchain Introduction:** What is blockchain?
2	Need for Distributed Records
3	Why Nakamoto came up with Blockchain based cryptocurrency?
4	Categorization of blockchain: Permission blockchain.
5	Permission less blockchain
6	Types of blockchain: Public blockchain.
7	Private and Hybrid blockchain.
8	Technologies Borrowed in Blockchain– hash pointers
9	Consensus, Byzantine fault-tolerant distributed computing
10	Digital cash etc, Applications of blockchain.
11	**Blockchain Components:** Public key infrastructure.
12	Cryptographic hash functions, Cryptographic nonce transactions
13	Key storage and exchange techniques
14	Ledgers, creation of blocks
15	Adding transactions into the blocks, Address creation
16	Chaining the blocks, Advantage and disadvantage of BC.
17	**Consensus Models:** Why do we require consensus?.
18	Types of consensus, proof of work
19	Proof of stake, Proof of authority and identity
20	Delegated proof of stake(DPOS) and Practical byzantine fault tolerance(PBFT)
21	Consensus comparison
22	**Smart contracts and forking:** Need of Smart contracts.
23	Smart contracts life cycle.
24	Interacting with smart contracts: Solidity programming
25	Forking: Soft forking
26	Hard forking, Use cases
27	**Blockchain limitation and misconception:** Immutability, , ,
28	51% attack, user's involvement in BC governance
29	blockchain death

30	Cyber and network based attack
31	Malicious user
32	No trust
33	Resource usage.
34	Solidity program
35	Problems solving using solidity program
36	Problems solving using solidity program
37	Problems solving using solidity program
38	Data types of solidity program
39	Use cases of ethereum.

Plan of action

- **Continuous Internal Evaluation process will be conducted for 50 marks**

3 tests and 2 events will be conducted

TEST 1	EVENT 1	TEST 2	EVENT 2	TEST 3	Total
20 marks	Quiz (20 marks)	20 marks	Mini project (20 marks)	20 marks	50 marks

Teaching Methodology: Black board, Multimedia projector, Digital smart board

Signature of Teacher   Signature of HoD/Chairperson

Dr. Anil Kumar K M   (M P Pushpalatha)