



# GUJARAT TECHNOLOGICAL UNIVERSITY

## Bachelor of Engineering Syllabus

Subject Code : 3164501

Subject Name : Blockchain Platforms and Use Cases

WEF Academic Year :	2021 - 22
Semester :	6
Category of the Course :	Professional Core

### Course Scheme :

Teaching Scheme			Total Credits	Assessment Pattern and Marks				Total Marks
L	T	PR	C	Theory		Practical		
				ESE (E)	PA(M)	ESE (V)	PA (I)	
4	0	2	5	70	30	30	20	150

### Course Objective :

- Students should be able to learn different types of blockchain platforms.
- Students should be able to understand different types of Decentralized applications.
- developed using blockchain technology.
- Students should be able to understand several types of blockchain use cases.

### Course Content :

Sr. No.	Course Content	No. of Hours
1	<b>Permissioned Blockchains :</b> Hyperledger Fabric Services, Model and Functions, Hyperledger Composer, Microsoft Azure Blockchain Platform and Services, Other Platforms: IOTA, TRON, Ziliqa, Cosmos, Ripple.	15
2	<b>Decentralized Application Platforms :</b> Augur-Decentralised Prediction Market Platform, Grid+-Energy Ecosystem Platform	08
3	<b>Challenges and Solutions Related to Blockchain :</b> Consensus, Scalability, Privacy and Confidentiality, Escrow, and Multi signature.	08
4	<b>Alternative Decentralized Solutions :</b> Interplanetary File System (IPFS) Working and Uses, Hashgraph- Working, Benefits, And Use-Cases.	11
5	<b>Blockchain Use Cases :</b> Financial Services Related Use Cases, Revolutionization of Global Trade, Digital Identity, Auditing Services, Supply Chain Management, Healthcare Related Services, Blockchain and IOT, Blockchain and AI.	14
	<b>Total</b>	<b>56</b>



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### Text Books / References :

1. Tiana Laurence, Blockchain for Dummies, 2nd Edition 2019, John Wiley & Sons.
2. Building Blockchain Projects, Narayan Prusty, Packt Publishing.
3. Mastering Blockchain: Deeper insights into decentralization, cryptography, Bitcoin, and popular Blockchain frameworks by Imran Bashir, Packt Publishing (March 17, 2017).
4. Blockchain: Blueprint for a New Economy by Melanie Swan, Shroff Publisher publisher/O'Reilly Publisher Media; 1st edition (2015).

### Course Outcome :

After Completion of the Course, Student will able to :

No.	Course Outcomes
01	To distinguish between different types of blockchain platforms.
02	To understand different types of uses of blockchain and apply it to some real-life scenarios accordingly.
03	To learn about the shortcomings of blockchain technology and their corresponding solutions.

### Online Resources :

1. <https://nptel.ac.in/courses/106105184/>
2. <https://www.coursera.org/learn/blockchain-platforms>.
3. Introduction to Blockchain Technology and Applications, [https://swayam.gov.in/nd1\\_noc20\\_cs01/preview](https://swayam.gov.in/nd1_noc20_cs01/preview)

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