



GUJARAT TECHNOLOGICAL UNIVERSITY

Bachelor of Engineering Syllabus

Subject Code : 3174504

Subject Name : Blockchain in FinTech

WEF Academic Year :	2021 - 22
Semester :	7
Category of the Course :	Professional Elective

Prerequisite :	Blockchain fundamentals.
Rationale :	Blockchain increases security and efficiency with fully digitized trade finance lifecycle. It can enable more transparent governance with reduced processing times, lower capital requirements and reduced risks of fraud, human error.

Course Scheme :

Teaching Scheme			Total Credits	Assessment Pattern and Marks				Total Marks
L	T	PR		Theory		Practical		
				ESE (E)	PA(M)	ESE (V)	PA (I)	
3	0	0	3	70	30	0	0	100

Course Content :

Sr. No.	Course Content	No. of Hours	% of Weightage
1.	Financial services in brief, Blockchain transformation for financial services, Challenges and implications, Promise and peril.	5	5
2.	Token economy in brief, introduction to token economy, Solution to Tragedy of commons, The BAT, The token landscape: cryptocurrencies, crypto commodities, cryptotokens.	9	10
3	Financing open Blockchain ecosystem in brief, Blockchain's impact on fund raising, Inherent tension of a privately funding a public good, evolving landscape of practices and regulatory approaches, Legal fictions and creative structuring, Creative solutions moving forward.	8	20
4	The global payment system, Introduction to global payments, History of payment systems, Better system, The strategies of existing players, Analysis.	6	15
5	Consolidating multiple ledgers, Receiver general ledger system, Public sector applications of Blockchain, A single ledger of Accounts.	6	25
6	Blockchain Transparency, Real time information symmetry, Native transparency in Blockchain technology, Transparency as a risk and asset, Technological approaches to privacy in Blockchain.	8	25
Total		42	100



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Reference Book :

- 1) Financial Services Revolution: How Blockchain is Transforming Money, Markets, and Banking By Alex Tapscott
- 2) Blockchain Development for Finance Projects By Ishan Roy, Packt
- 3) Crypto assets: The Innovative Investor's Guide to Bitcoin and Beyond By Chris Burniske , Jack Tatar

Course Outcome :

After Completion of the Course, Student will able to :

No.	Course Outcomes	RBT Level*
01	Understand how Blockchain can create a token-based incentive system.	UN
02	Analyze the traditional and Blockchain based financial services.	UN
03	Create an exchange and API for transaction of tokens and cryptocurrencies.	AP

*RM: Remember, UN: Understand, AP: Apply, AN: Analyze, EL: Evaluate, CR: Create

Suggested Course Practical List :

- 1) Build a Blockchain Wallet for Fungible and Non- Fungible Assets.
- 2) Design a payment gateway for online merchants and create an API for generating dynamic payment addresses.
- 3) Build a Tamper proof document storage system. Take a case study of Home loan related documents.
- 4) Develop a currency trading exchange for Market making.

List of Laboratory/Learning Resources Required :

- 1) Computers or laptops.
- 2) Setting up of Hyperledger Fabric, Ethereum , Stellar.
