

MCA IN BLOCKCHAIN TECHNOLOGY

An immersive program to help emerging leaders navigate the dynamic digital landscape to craft winning Business strategies.



24 months

Global
Accreditation

Global Faculty

Certification from



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ABOUT AMITY UNIVERSITY ONLINE

Amity University Online is a value-based institution with an innovative bent towards education that impacts lives across boundaries. Through immersive technology, ground-breaking methodology and a worldwide community, we constantly endeavour to expand the horizons of minds in a virtual space around the globe. We are also home to a range of University Grants Commission (UGC) recognized programmes at Masters, Bachelors, Post Graduate Diploma level for nurturing young professionals. With 225000 students spread across countries with diverse backgrounds and a strong force of highly accomplished faculty, we create an ecosystem buzzing with new ideas and innovations.

With our eyes on the future, we keep on pushing the limits, breaking barriers, overcoming obstacles, and forging new connections. Our vision fuels our success and our consistent progress in global rankings assures us that more is yet to come.

PRESTIGIOUS RANKING AND ACCREDITATIONS



PROGRAM OVERVIEW

This is a super-specialized program for ambitious professionals looking forward to a career in Blockchain Technology. Business and career growth are determined by the proliferation of technologies, and thus the requirements and expectations from the traditional system have now changed.

This two-year program offers a core course along with a specialisation course in Blockchain Technology. The program structure provides candidates with unmatched flexibility to learn at their own pace and attend classes at their convenience. The course is practice-oriented and intended to give exposure to real-world applications. This course aims to familiarise the learners with the scope of Blockchain technology, implementation and management so that they understand the current industry demands and be well prepared for the career they are looking for.

What makes Amity Online MCA in Blockchain Technology special?

Empower yourself into becoming a successful working professional with a world-class online MCA programme by Amity University Online. The programme is specially designed to enhance your innovative and entrepreneurial abilities and gain skills to achieve rapid growth & success in the corporate world. The program is designed to provide a thorough knowledge of the chosen field and applications of Blockchain Technology. This will also help in developing the skills to build practical Blockchain applications that regulate your business goals.



INDUSTRY INSIGHTS

THE DEMAND FOR BLOCKCHAIN PROFESSIONALS HAS INCREASED BY 300% SINCE 2019

The annual growth rate of demand of blockchain professionals is expected 67% from 2020-25

The blockchain market size was USD 2.01 billion in 2019 and is projected to reach USD 69.04 billion by 2027, exhibiting a CAGR of 56.1% during the forecast period [CAGR= Compound annual growth rate]

WHY PURSUE AN MCA IN BLOCKCHAIN TECHNOLOGY FROM AMITY UNIVERSITY ONLINE?

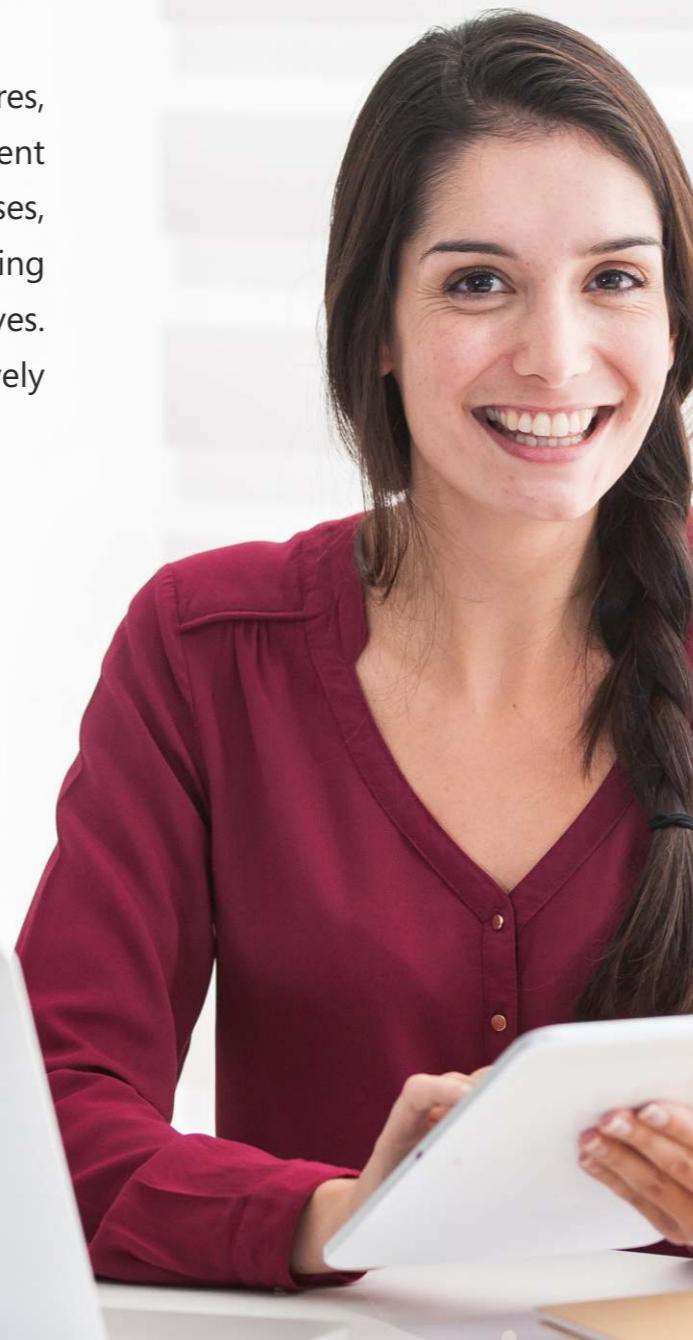
Amity University Online India's leading professional learning and higher education platform. When you choose this program, you also get access to our extensive pool of industry experts and dedicated career assistance.

- Become a globe-trotting professional in a Blockchain Technology
- Gain the recognition of an MCA in Blockchain Technology from a reputed institute
- Daily live classes by global faculty
- Gain practical skills through case study-based learning
- Become industry-ready with mentorship from experts
- Get dedicated career support from mentors
- Build your skills with a curriculum designed by leading academicians & industry experts
- Learn alongside a diverse batch of peers from 80+ countries

PROGRAM HIGHLIGHTS

Pedagogy for Course Delivery

The class will be taught using recorded video lectures, online live sessions and case studies to implement learning. In addition to assigning case studies courses, instructors will spend a significant time understanding the concept of innovation through the student's eyes. The instructors will cover the ways to think innovatively liberally using thinking techniques.



“ You will build intellectual muscle by engaging with some of Wharton's most highly trained and experienced faculty whose research and teaching prowess will capture your imagination, and cause you to think about your career and organization in new ways. **”**

-DEAN ERIKA JAMES,
PHD at The Wharton School

MCA in Blockchain Technology will help you to



On the go learnings and 24/7 access to study material & video lectures



Stay on track and get the most out of the program through dedicated student mentors



Deep dive into concepts, tools and requirements for Blockchain technology trending in the industry



100% Career assistance

Unique Program Features



Focus on strategy & tools



Gain in-depth subject knowledge and expert insights from an industry-driven comprehensive curriculum.



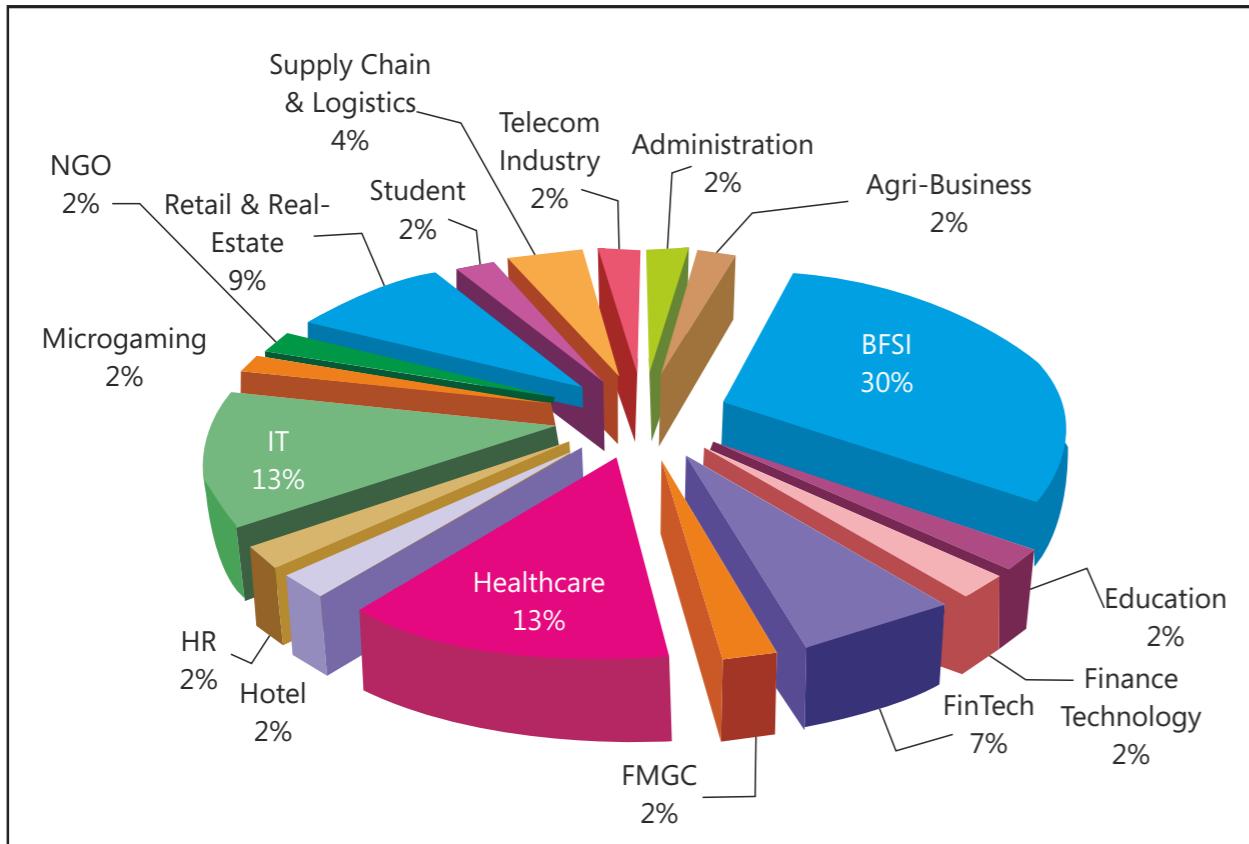
Live interaction with Blockchain experts and Corporate leaders



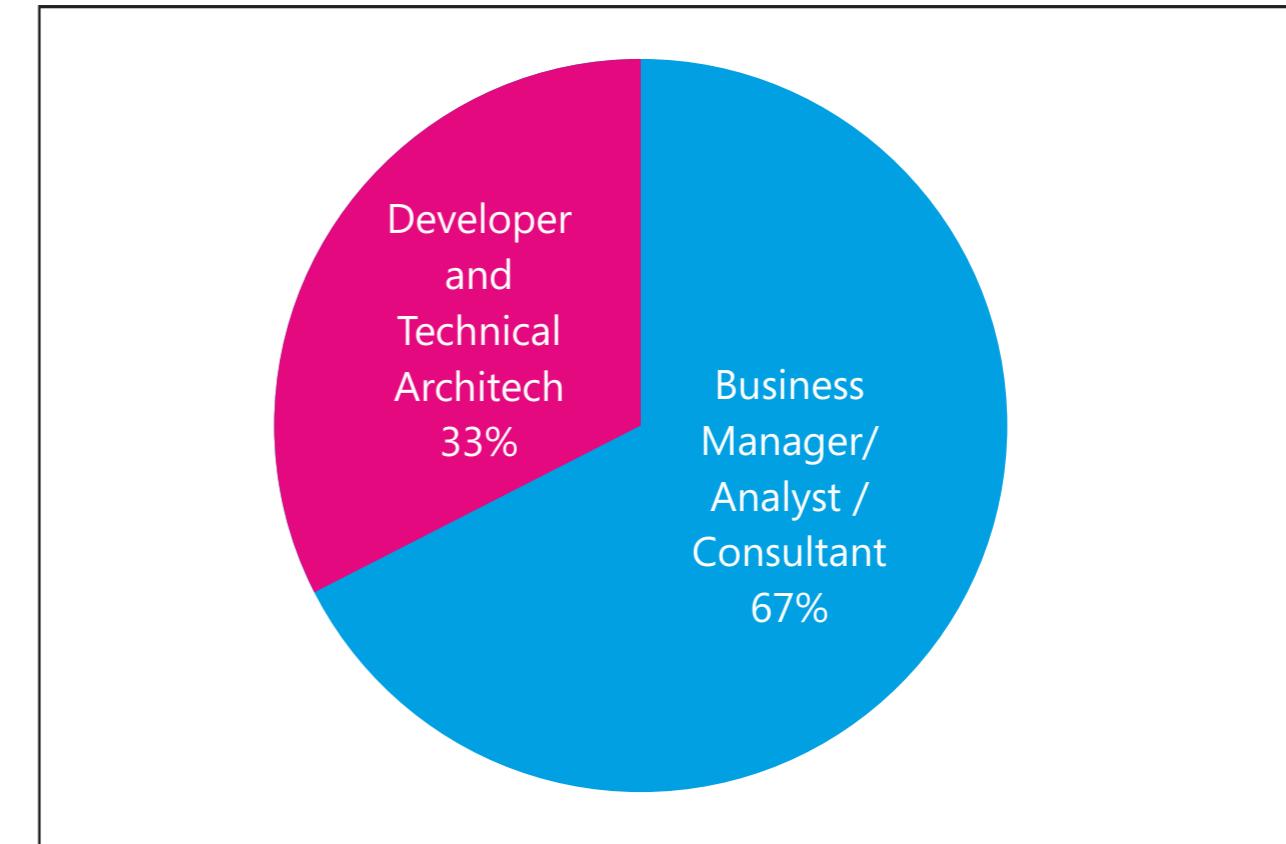
Hands-on experience to solve corporate level Blockchain issues

BATCH PROFILE

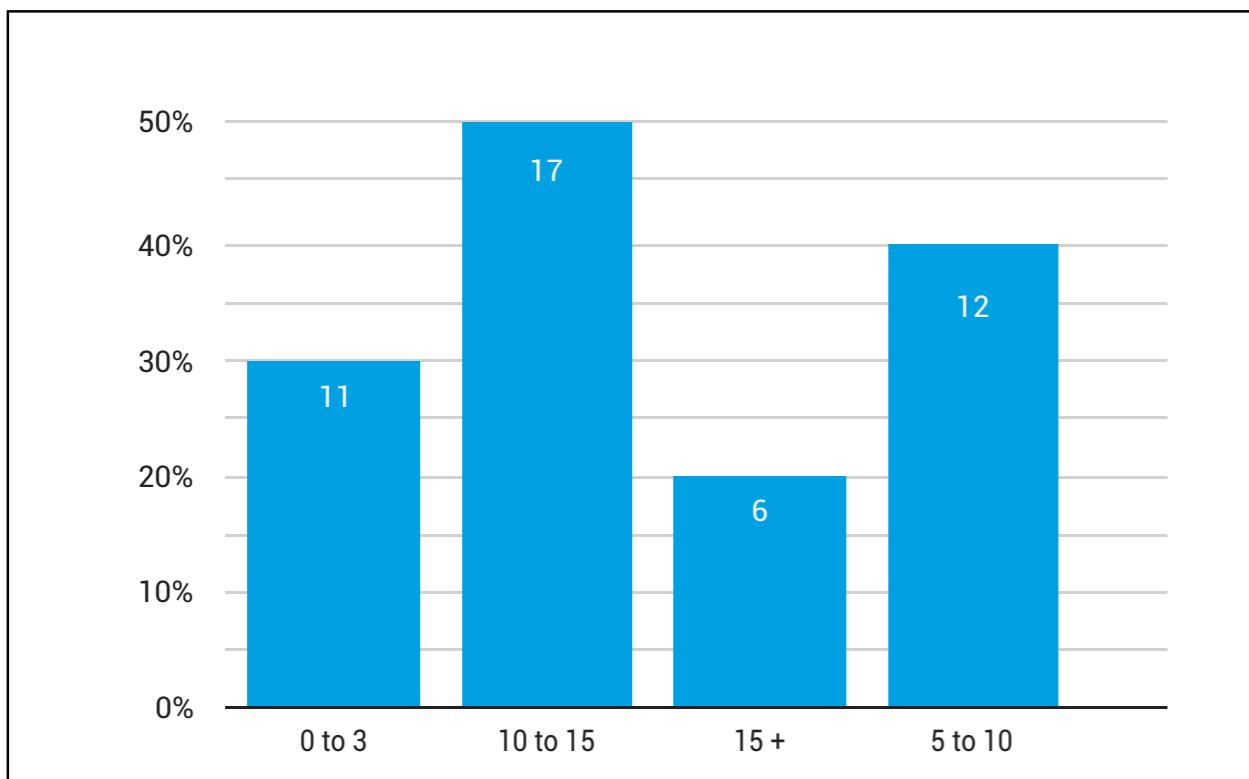
Variation of Industry



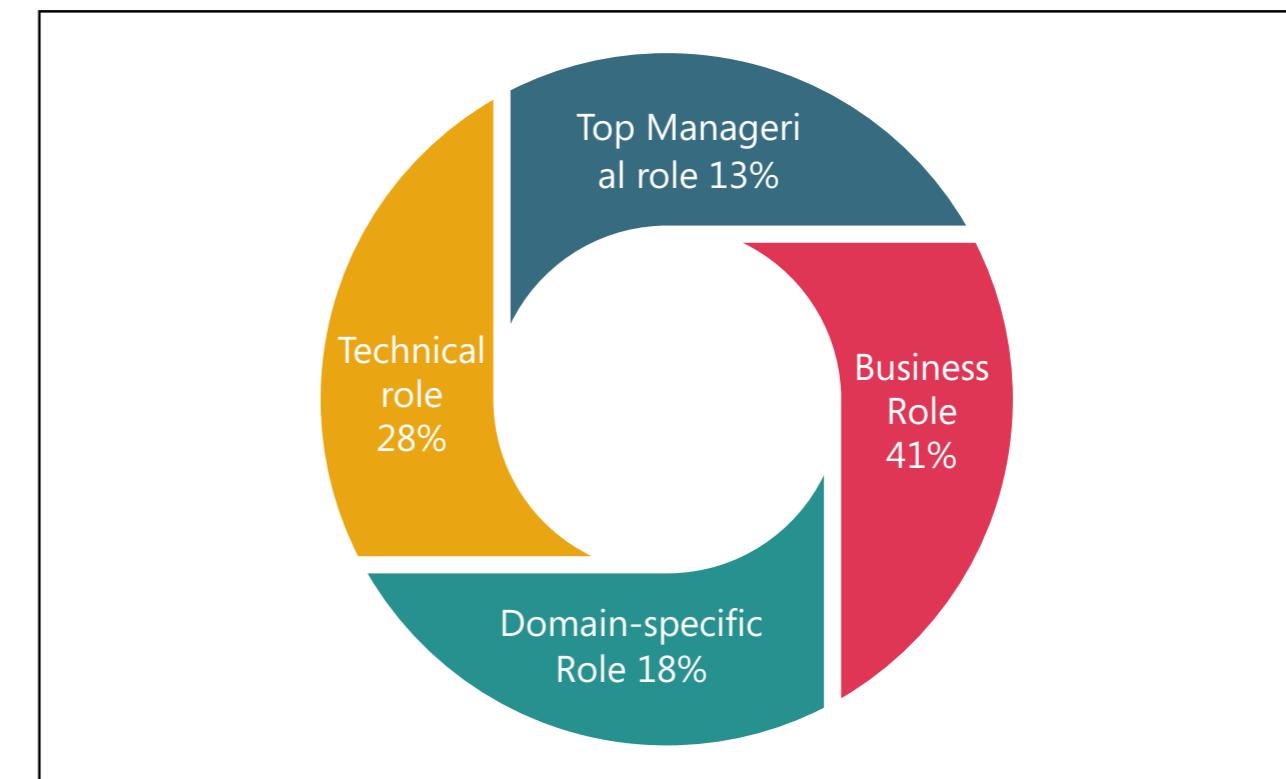
Learning Track



Yrs of Work Experience



Current Role



COURSE CURRICULUM

Subject	
Semester 1	
Course I	Graph Theory and Combinatorics
Course II	Advanced Database Management Systems
Course III	Advanced Software Engineering Principles
Course IV	Professional communication
Course V	Core Java
Semester 2	
Course I	Network Security and Cryptography
Course II	Cognitive Analytics and Social Skills for Professional
Course III	Data Structures and Algorithm Design
Course IV	Research Methodology
Semester 3	
Course I	Cloud Infrastructure and Services
Course II	Quantitative Aptitude
Course III	Professional Ethics
Course IV	Seminar (Evaluation)
Course V	Unix /Linux Programming
Semester 4	
Course I	Major Project
Specialization	
Course I	Blockchain
Semester 3	
• Architecting Blockchain Solutions • Building Ethereum Applications • Programming Fundamentals: Golang and Solidity • Technicalities and Implementation of Blockchain	
Semester 3	

Duration: 2 Years • **Semesters:** 4

CORE SPECIALIZATIONS

Course 1 : Fundamentals of Blockchain

- ❖ Blockchain Fundamentals
- ❖ Digital Ledger
- ❖ Cryptography Essentials
- ❖ Applications of Blockchain Technology

Course 2 : Introduction to Ethereum, Enterprise Blockchain applications & Hyperledger

- ❖ Introduction to Ethereum
- ❖ Smart contracts
- ❖ Enterprise Blockchain & Hyperledger
- ❖ Consensus
- ❖ Hyperledger Fabric

Course 3: Programming Fundamentals: Golang and Solidity [For TD track]

- ❖ Solidity
- ❖ Data Types
- ❖ Variables & Statements
- ❖ Golang
- ❖ Loops and Functions

Course 4 : Building Ethereum Applications [For TD track]

- ❖ Ethereum Applications
- ❖ Advanced development: Tools and Frameworks
- ❖ ERC 721 and Creating an ERC 721 token
- ❖ Scaling Ethereum: State channels
- ❖ Scaling Ethereum: Sidechains and serenity

Course 5: Technicalities & Implementation of Blockchain

- ❖ Blockchain Implementation & Use cases
- ❖ Finance & Banking
- ❖ Remittance with crypto-currencies
- ❖ Supply Chain & Logistics Introduction
- ❖ Public Benefit Distribution System

Course 6: Architecting Blockchain Solutions [For BM track]

- ❖ Ethereum-2
- ❖ Auxledger-2
- ❖ Hyperledger
- ❖ Corda
- ❖ Defining requirements and functional components

SPECIALISATIONS

SEMESTER-3

Course 1

Fundamentals of Blockchain

Syllabus:

MODULE#	TOPICS	WEIGHTAGE
1	Blockchain Fundamentals	20%
	<ul style="list-style-type: none">• What is blockchain• How blockchain works• Blockchain Vocabulary• Blockchain vulnerabilities• Consensus• Cryptocurrency: Bitcoin and Ethereum• Smart Contracts• Types & Applications of Blockchain	
2	CTECH201 - Digital Ledger	20%
	<ul style="list-style-type: none">• Critique a cryptocurrency• Blockchain Applications in Business• Use a Cryptocurrency wallet• Devise a Blockchain Application	
3	CTECH202 - Cryptography Essentials	20%
	<ul style="list-style-type: none">• Advantages & Disadvantages of Private Key Encryption• Analyse an Encryption scheme• Explore the use of Key Pairs• Examining the legal aspects of digital signatures• Devise a commodity exchange	

Syllabus:

MODULE#	TOPICS	WEIGHTAGE
4	CTECH203 - Blockchain Fundamentals	20%
	<ul style="list-style-type: none">• Permissioned or Permissionless Blockchains• Analyse a sample blockchain protocol• Mining and the future of Blockchain• Examine proof of work• Choose the type of blockchain for your business need.	
5	CTECH204 - Applications of Blockchain Technology	20%
	<ul style="list-style-type: none">• Design a fair lottery• Example of smart contract in Business• Apply a smart contract• Crime prevention & smart contracts• Make your smart contract application robust	

Course 2

Introduction to Ethereum, Enterprise Blockchain applications & Hyperledger

Syllabus:

MODULE#	TOPICS	WEIGHTAGE
1	Introduction to Ethereum	20%
	<ul style="list-style-type: none">• Introduction to Ethereum• Ethereum basics• Transactions, smart contracts & gas• Ethereum Virtual Machine• Blockchain & mining	
2	Smart contracts	20%
	<ul style="list-style-type: none">• Solidity & data types, functions, constructors• Enterprise Ethereum	
3	Enterprise Blockchain & Hyperledger	20%
	<ul style="list-style-type: none">• Introduction to Hyperledger• Hyperledger portfolio• Hyperledger fabric 2.0	
4	Consensus	20%
	<ul style="list-style-type: none">• Distributed consensus• Consensus algorithm : Paxos, Raft, BFT & PBFT	
4	Hyperledger Fabric	20%
	<ul style="list-style-type: none">• Terminologies• Fabric design• Fabric 2.0 chain code lifecycle• Transaction flow• Identity management• Project on Hyperledger	

Course 3 [For TD Track]

Programming Fundamentals: Golang and Solidity

Syllabus:

MODULE#	TOPICS	WEIGHTAGE
1	Solidity	20%
	<ul style="list-style-type: none">• Introduction to Solidity• Structure of a contract	
2	Data Types	20%
	<ul style="list-style-type: none">• Booleans, Integers, Address• Arrays, Strings, Enums,• Structs, Mappings	
3	Variables & Statements	20%
	<ul style="list-style-type: none">• Units & Globally Available variables• Expressions & Control Statements• Access specifiers: public, private, internal, external• Functions & Events	
4	Golang	20%
	<ul style="list-style-type: none">• Introduction to Go Language• Program Structure and Syntax• Data Types, Variables & Constants• Operators & Decision Making	
5	Loops and Functions	20%
	<ul style="list-style-type: none">• Loops and Functions• Pointers, Scope, Arrays• Struct, Map & Range, Recursion• Type Casting, Interfaces, Error Handling	

Course 4 [for TD Track]

Building Ethereum Applications

Syllabus:

MODULE#	TOPICS	WEIGHTAGE
1	Ethereum Applications	20%
	• DApp development • DApp examples	
2	Advanced development: Tools and Frameworks	20%
3	ERC 721 and Creating an ERC 721 token	20%
4	Scaling Ethereum: State channels	20%
5	Scaling Ethereum: Sidechains and serenity	20%

Course 5 [for BM Track]

Technicalities & Implementation of Blockchain

Syllabus:

MODULE#	TOPICS	WEIGHTAGE
1	Blockchain Implementation & Use cases	20%
	• Latest Case studies for the implementation of Implementation	
2	Finance & Banking	20%
	• Latest Case studies for the implementation of Implementation	
3	Remittance with crypto-currencies	20%
	• Latest Case studies for the implementation of Implementation	
4	Supply Chain & Logistics Introduction	20%
	• Latest Case studies for the implementation of Implementation	
5	Public Benefit Distribution System	20%
2	• Latest Case studies for the implementation of Implementation	

Course 6 [for BM Track]

Architecting Blockchain Solutions

Syllabus:

MODULE#	TOPICS	WEIGHTAGE
1	Ethereum - 2	20%
2	Auxledger-2	20%
3	Hyperledger	20%
4	Corda-2	20%
5	Defining requirements and functional components	20%



Specialization I

Digital Ledger
Credits: 5



Specialization II

Cryptography Essentials
Credits: 5



Specialization III

Blockchain Fundamentals
Credits: 5



Specialization IV

Applications of
Blockchain Technology
Credits: 5



FACULTY

Faculty from eCornell



ARI JUELS

Ari Juels is a professor at the Jacobs Technion-Cornell Institute at Cornell Tech, a Computer Science faculty member at Cornell University



Mr. RAFAEL PASS

Rafael Pass is an Associate Professor of Computer Science at Cornell University and Cornell Tech. Professor Pass' research interests are in the field of Cryptography



Mr. PRANAV SHASTRI

Program Director, Master in IT & Pursuing PhD in Computer Science with 10+ years of training experience



Mr. KARTIK K

He has 12+ years of experience in Corporate Implementations as Blockchain Architect, he has worked with Apple Engineering, Google Dev Group and Wipro.



Mr. ANURAG AGARWAL

Digital Transformation leader with 22+ years of professional experience. Passionate to develop the Blockchain ecosystem one block at a time!! Special interests include IoT and Big Data Analytics.



Mr. NAKUL SHAH

Director, Sate Development. 8+ Years of professional experience. Financial Engineering, University of Michigan



Mr. SATISH SALIVATI

He has 17+ Years of Experience and is an entrepreneur with hands-on experience in Blockchain and has interests in Analytics, HR, Tech.



Mr. AKASH GAURAV

He is the Founder of Auxledger and Member of Advisory board of Cashaa.



Mr. JITENDER BHUTANI

He is Senior Blockchain Developer at Auxesis Group and has 4+ years of IT Experience in Infosys, Amdocs and Crisil.



Mr. ABHISHEK BHATTACHARYA

Co-founder, Whrrl, India's first gri-Fintech Blockchain platform. He is an author & technology evangelist with 5+ years of experience in Blockchain



Mr. KOSHIK RAJ

6+ Years of Professional experience Master's in CISSA, Manipal Institute of Technology

CAREER PATHWAYS



- Enhance your career aspirations with assistance from our Virtual Job Fair, existing Corporate and Alumni network

- Get connected with our Career Counsellor towards the end of the program to be interview-ready as per the current industry requirements.

BLOCKCHAIN TECHNOLOGY ROLES

Entry Level

- Blockchain Business Analyst
- Blockchain Designer
- Smart Contract Developer
- Blockchain Generalist

Mid Level

- Blockchain Developer
- Blockchain Engineer
- Blockchain Consultant

Advanced Level

- Blockchain Project Manager
- Blockchain Architect
- CTO/Developer for Block MVP

APPLICATION PROCESS AND ELIGIBILITY

READY TO ADVANCE YOUR CAREER?

APPLICATION PROCESS: Apply Now
Call: 18001023434
to book free counselling session.

Eligibility

- Candidates must have completed Graduation Degree
- Applicant must possess sufficient knowledge and understanding of English Language.

