



SIBAU  
BLOCKCHAIN  
INNOVATION  
CENTER

SUKKUR IBA UNIVERSITY  
SIBAU BLOCKCHAIN INNOVATION CENTER

# BLOCKCHAIN DEVELOPMENT:

THEORY AND  
PRACTICE

SHORT COURSE

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THEORETICAL KNOWLEDGE & HANDS ON SESSIONS



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## ABOUT THIS COURSE

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This 3-months program will equip you with the knowledge to understand the business applications of blockchain technology, and the confidence to discover opportunities for problem solving and innovation.

The program draws on the work of leading computer science faculty & instructors to examine blockchain technology from a business perspective. You will be offered a foundational overview of how blockchain technology works, in order to demystify the technology and to understand its possibilities and limitations.

Over the course of six modules, you will be guided to understand the blockchain technology beyond the fundamentals, and to appreciate its application and promise in the context of your own organization.

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## WHAT THE PROGRAM COVERS

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The program draws the theoretical & practical understanding of blockchain & its application, highlighting its capacity to enable widespread, transformational change. You will understand the issue relating current IT practices in business and how blockchain help to resolve those.

You'll examine how blockchain can resolve conventional storage & verification issues. You'll gain a deeper understanding of Hyperledger fabric framework & Ethereum platform of the blockchain. You'll be guided to develop your own blockchain applications. The public blockchain will be developed in the Ethereum platform, and for private blockchain, the Hyperledger fabric will be used.

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## WHY ONE SHOULD LEARN BLOCKCHAIN?

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It is applicable to all that has value. It is the edge cutting technology. It is considered as a financial layer over the internet and in fact popularized as ten times more powerful than the internet itself! Moreover, there is a high demand for this technology in industries. A lot of industries are willing to adapt itself to this technology. This means everyone's is at the end adopt this technology which will create demand for people who have a good knowledge of this technology. So, to sum up, Blockchain technology has a wide scope.

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## WHO SHOULD LEARN THIS COURSE?

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Young IT professionals, recent graduates, and senior undergrad students should adopt this technology because it provides a backdoor to compete with the developed world. This course will also help one to be an independent blockchain developer.

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## WHAT YOU'LL LEARN

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### Module 1

#### Discover Blockchain

This module will help you to discover the power of blockchain and issues related to conventional storage. Moreover, the types of blockchain will also be discussed in this module.

### Module 2

#### Introduction to Cryptocurrencies and its usecases

This module will cover the cryptocurrencies and its related applications. Additionally, the usecases of crypto-currencies will also be discussed.

### Module 3

#### Developing Smart Contracts in Ethereum

Ethereum is the most popular and early blockchain platform. Apart from the introduction, the module will be completely lab based with hands-on sessions relating various Ethereum applications.

### Module 4

#### Hyperledger Fabric

This module will be taught in a computer lab with hands-on sessions. The unique usecases will be used to introduce, develop and deploy the Hyperledger based private blockchain products.

### Module 5

#### Business Strategies

In this module, you will be familiar with business strategies. Besides, the case studies and possible business usecases will be discussed in detail.

## Module 6

### Implementation of usecases (Capstone Project)

The group project will start in the last module. During this module, groups will be required to develop both backend and frontend of an original blockchain related product. The type of blockchain (public/private) and sector (Govt/Financial/tech etc.) is the choice of group.

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