

ON-DEMAND COURSE - SYLLABUS

BLOCKCHAIN FOUNDATIONS

Duration:	15 Hours
Delivery:	Online On-Demand / Self-Paced Mentor Supported - 15 Hours
Instructor(s):	Bryant Nielson
Office Hours:	10:00 AM to 6:00 PM Eastern Standard Time
Email:	admin@blockchainhub360.com
Prerequisites:	None
Continuing Education Units:	1.5
Microcredential Exam:	Blockchain Foundations
Certification Body:	Blockchain Certification Association

Course Overview:

This course is an introduction to the world of blockchain, bitcoin and distributed ledgers. You will learn the basics, look at how blockchain works, explore Bitcoin, review blockchain's brief and fascinating history, and show you the practical usage of this technology. The objective of the course is to provide a solid foundation for those looking to gain a deeper understanding and learn how it will affect nearly all business areas. With a firm focus on, but not entirely limited to the finance industry we will look at use cases that are already in the market, as well as emerging use cases set to alter how we operate businesses, and safeguard our personal information.

Course Composition:

Online On-Demand: Blockchain Foundations Modules 1 - 13

Learning Objectives:

- Recognize what blockchain is, and what it is not (it's not bitcoin!)
- Understand blockchain fundamentals and how the technology will disrupt most industries
- Distinguish Public vs Private blockchains
- Identify key blockchain resources and communities

Demonstration of Learning Outcomes:

At the conclusion of the Blockchain Foundations course students will be able to understand and articulate the core concepts of Blockchain technology that are, or soon will be, commonly used across most industries to solve large-scale problems and invent new ways of conducting business.

Evaluation:

Evaluation is based on participation and a final exam.

Weighted:

50% participation

50% on the final grade

80% overall grade is required in order to receive a Certificate of Completion.

Grading Policy:

Pass or Fail. No Credit (NC).

Attendance Requirements:

Students are expected to complete all online self-paced modules and assessments. Certificate of Completion will not be issued until all online modules are complete, including the final exam.

Student conduct and etiquette:

Students will be expected to be courteous in their conduct and communications to the instructor and classmates at all times whether such conduct or communication is in person, by telephone or electronic communications.

Behavior that persistently or grossly interferes with instructor or other student activities is considered disruptive behavior and may be subject to disciplinary action. Such behavior inhibits other students' ability to learn and an instructor's ability to teach. The instructor may require a student responsible for disruptive behavior to leave the learning environment pending discussion and resolution of the problem and may report a disruptive student to the Student Affairs Office

Note: Disruptions, or any other distraction in the learning environment may result in a failing grade.

Course Evaluations

Course evaluations and program surveys are important components of the educational process. Students are encouraged to complete the student course evaluation form issued at the conclusion of the course. The evaluation is anonymous.

Computer/Information Literacy Expectations for Students enrolled in this class

Students in this class are expected to:

1. Use a word processing program for writing assignments (e.g., Microsoft Word)
2. Be able to access assigned websites through the internet
3. Have access to PC or mobile device for participation in course content

Course Module Overview:

BLOCKCHAIN FOUNDATIONS

Module 0: Course Introduction

Course Introduction
Course Overview

Module 1: Blockchain Basics

Origins of Blockchain
Bitcoin History
FOMO
How Blockchain Works
Hashing & Mining

Module 2: Blockchain Implementations

Public vs Private Blockchains
Permissions - Hybrids
Permissioned vs Permissionless Discussion

Module 3: Consensus Protocols

Consensus
Consensus Protocols

Module 4: Cryptography

Cryptography
Digital Signatures / Hashing
Terms and Definitions
Hash Functions

Module 5: Blockchain Smart Contracts

Introduction to Smart Contracts
Smart Contract Intensive
Smart Contract Pros and Cons
Oracles
Legal Questions

Module 6: Blockchain Wallets

Public and Private Keys
Wallets types
Multisig

Module 7: Blockchain Pros & Cons

Speed, cost and latency
Throughput
Public vs Private Blockchains
Open source vs proprietary

Module 8: Public Blockchain Based Applications

Augur

Digix

Lemonade

Module 9: Governments & Regulation

Who regulates it?

Currently regulatory landscape

US, UK and EU government view

Module 10: Regulatory Reporting

What is regulatory reporting

RegTech – a deeper look

Transaction reporting via the blockchain

Simplify complex systems

Module 11: DAO (Decentralized Autonomous Organization)

What is a DAO

How does it work

How was it funded

What happened with the DAO attack?

What are the ramifications of the DAO attack?

Module 12: Current State of Blockchain

Bitcoin Blockchain

Ethereum / Eris / Tendermint / BigChainDB

Hyperledger

Module 13: Blockchain Trilemma

Decentralization

Security

Scalability

FINAL EXAM