



BLOCKCHAIN FOUNDATIONS COURSE

ENROLL TODAY! Contact: (864) 656-2200 - ejohns5@clemson.edu

TARGET GROUP

Students, Executives, Entrepreneurs, and Enthusiasts interested in understanding the basics of blockchain technology and the impact it will have in our work and personal lives.

PREREQUISITES FOR THE COURSE

None – 10th grading & math required

COURSE OUTLINE - DAY 1

BLOCKCHAIN BASICS 1

- Origins of Blockchain
- Disintermediation
- How Bitcoin Works
- Other Consensus Methods

CRYPTOGRAPHY

- Terms and Definitions
- Hash Functions

BLOCKCHAIN SMART

CONTRACTS

- Data
- Permissions
- Tokens
- Solidity

BLOCKCHAIN BASICS 2

- Public vs Private Blockchains
- Hybrids
- Permissioned vs Permissionless

BLOCKCHAINS SECURITY

- Blockchain Security - a primer
- Consensus engines on Blockchains
- Decentralization of computing architectures

ACCESSING UTILITIES KU AND TX AND WALLETS

- Public / Private Keys / Wallets
- Passphrase-Encrypted Wallets (AKA BIP38)
- Multisig

REVIEW OF PUBLIC BLOCKCHAIN APPS

- InsurEth
- Augur
- Digix

USE CASE DEEP DIVE

- Blockchain in global financing
- Use of blockchain to create efficient interactions
- Blockchain used to resolve business interactions
- Central Banks use of Blockchain
- What is regulatory reporting
- RegTech – a deeper look
- Transaction reporting via the blockchain
- Simplify complex systems

THE FUTURE OF BLOCKCHAIN

- The Future – A vision statement
- Threat or opportunity?
- The future of Banking and Finance
- Adoption of Blockchain by Central Banks

GOVERNMENTS & REGULATION

- Who regulates it?
- Currently regulatory landscape
- US, UK and EU government view

DAO

- How does it work
- How was it funded
- What happened with the DAO attach?
- What are the ramifications of the DAO attack?

BREAKOUT SESSION

- Payments / Remittances
- Provenance
- Identity

COURSE OUTLINE - DAY 2

BLOCKCHAIN PROS & CONS

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

CURRENT STATE OF BLOCKCHAIN

- Bitcoin Blockchain
- Ethereum / Eris / Tendermint / BigChainDB
- Hyperledger