

ETHEREUM BOOTCAMP

COURSE OVERVIEW:

This 3-day instructor-led course is designed for programmers and developers who want to take a comprehensive deep dive in writing smart contracts and building applications that interact with them. You will learn solidity and build both a basic app and smart contract with our exclusive hands-on labs. This course will introduce you to the Web3 & Truffle framework and link everything together by building a Full Web Project with Ethereum. The Certified Blockchain Developer Ethereum exam is included with class.

This course has been meticulously put together and taught by world-class subject matter experts. The live training expert will spend over 50% of the time on labs covering the steps to integrate/develop an application with Ethereum. There are use cases, proof of concepts, as well as interactive lab work about the concepts.

PREREQUISITES:

This course is highly technical in nature and would require the student to be comfortable with coding. To prepare for the class all students MUST:

- Provide their own computer (Mac/PC/Linux). Provide their own computer (Mac/PC/Linux). Note that all labs are hosted in a virtual environment.
- Basic Programming skills of C/C++ or Java Script

COURSE OUTLINE:

Chapter 1: What is Blockchain and Smart Contract?

- What is Blockchain and how does it work?
- Bitcoin vs Ethereum
- Smart Contract
- How you can use Smart Contracts?
- Advantages of Smart Contracts
- Solidity
- LAB TASK
 - Types of Variables in Solidity
 - Public and Private Code
 - Public Variables and Functions
 - Private Variables and Functions
 - Internal Functions
 - External Functions
 - Smart Contract Constructors
 - Constant Variables
 - Setting Variables
- LAB CHALLENGE

CHAPTER 2: Smart Contracts with WEB3.JS

- LAB
 - Installing & Running the Ethereum TestRPC
 - Installing Web3.js
 - Changing the Environment in Remix
 - Creating the UI
 - Using Web3.js to Connect & Interact with the Smart Contract
- SOLUTION
- LAB CHALLENGE

CHAPTER 3: Smart Contract Events with WEB3.JS

- AIM
- LAB
 - The Current Contract
 - Defining the Smart Contract Event
 - Updating the UI
- LAB CHALLENGE

CHAPTER 4: Functions, Mapping, and Structs

- THEORY
 - Functions
 - Mappings
 - Structs
- LAB
 - The Smart Contract
 - Creating a Modifier
 - Using the Modifier
 - Web3 UI's Modifier Handling
- LAB
 - Creating a Struct
 - Creating the Mapping
 - Map Addition
 - Get from the Mapping
 - The Full Contract
 - Count from Map
- LAB CHALLENGE

CHAPTER 5: Inheritance and Deployment

- THEORY
 - Object-oriented programming
 - Inheritance
- LAB

- Current Contract
 - Creating a Base Contract
 - Changing from Strings to bytes
 - Continuing the Project
 - Installing MetaMask
 - Deploy Contract to the Ropsten Test Network
- LAB
 - Update the HTML Form
 - Update the JavaScript
 - Using the App
- LAB CHALLENGE

CHAPTER 6: Embark Framework and it's Deployment

- Blockchain (Ethereum)
- Decentralized Storage (IPFS)
- Decentralized Communication
- Web Technologies
- LAB
 - Installing Embark Framework
 - Hello World with Embark Framework
 - First Contract Deployment with Embark Framework

CHAPTER 7: Solidity Smart Contracts Testing

- THEORY
 - What is Software Testing?
- LAB
- LAB CHALLENGE

CHAPTER 8: Contracts Management with Factories

- THEORY
 - Factory
- LAB
- LAB CHALLENGE

CHAPTER 9: IPFS Files Hosting

- THEORY
 - IPFS
 - FILES HOSTING
- LAB
 - Get your hosting server
 - Install IPFS on the Server
- LAB CHALLENGE

CHAPTER 10: End to End Development of DAPP

- AIM
- LAB
 - Setup the Project
 - Program the Smart Contract
 - Create the Front-end of the application
 - Deploy the App with IPFS
- LAB CHALLENGE

SUNSET LEARNING INSTITUTE (SLI) DIFFERENTIATORS:

Sunset Learning Institute (SLI) has been an innovative leader in developing and delivering authorized technical training since 1996. Our goal is to help our customers optimize their cloud technology investments by providing convenient, high quality technical training that our customers can rely on. We empower students to master their desired technologies for their unique environments.

What sets SLI apart is not only our immense selection of trainings options, but our convenient and consistent delivery system. No matter how complex your environment is or where you are located, SLI is sure to have a training solution that you can count on!

Premiere World Class Instruction Team

- All SLI instructors have a four-year technical degree, instructor level certifications and field consulting work experience.
- Sunset Learning has won numerous Instructor Excellence and Instructor Quality Distinction awards since 2012

Enhanced Learning Experience

- The goal of our instructors during class is ensure students understand the material, guide them through our labs and encourage questions and interactive discussions.

Convenient and Reliable Training Experience

- You have the option to attend classes at any of our established training facilities or from the convenience of your home or office with the use of our HD-ILT network (High Definition Instructor Led Training)
- All Sunset Learning Institute classes are guaranteed to run – you can count on us to deliver the training you need when you need it!

Outstanding Customer Service

- Dedicated account manager to suggest the optimal learning path for you and your team
- Enthusiastic Student Services team available to answer any questions and ensure a quality training experience