BOARD INFINITY

COURSE 1 OF 3 · BLOCKCHAIN TECHNOLOGY APPLIED SPECIALIZATION

Smart Contracts - Blockchain Technology Applied

Full course syllabus - every module, video lesson, reading and assignment, from smart contract fundamentals to Solidity, Ethereum deployment and auditing.

Board Infinity
Instructor · Offered on Coursera

3	43	12	1 week
Modules	Video lessons	Assignments	At 10 hours a week

INSIDE THE COURSE

01	Fundamentals of Smart Contracts	5 hours to complete
02	Developing Smart Contracts	5 hours to complete
03	Advanced Smart Contract Concepts	4 hours to complete

Enroll on Coursera

https://www.coursera.org/learn/introduction-to-smart-contracts

01 ABOUT THE COURSE

A build-first course in smart contracts.

Smart Contracts - Blockchain Technology Applied explains how self-executing contracts work, from their history and the platforms that run them to the legal and regulatory landscape around them.

You then get hands-on with Solidity - writing, testing and deploying contracts on Ethereum and optimizing gas fees - before moving to oracles, advanced Solidity and security auditing. 43 videos, 9 readings and 12 assignments in all.

WHO IT'S FOR

Software developers
Adding Solidity and Ethereum deployment to their stack.

Entrepreneurs
Understanding what smart contracts can do for a product.

Tech enthusiasts
Seeing how self-executing contracts work under the hood.

Web3 career switchers
Building the foundation for blockchain development roles.

WHAT YOU'LL BUILD

01 **A platform choice you can defend** Module 1
Compare Ethereum, EOS and other platforms, and weigh the legal and regulatory picture

02 **A working Solidity contract** Module 2
Set up a development environment, then write, test and debug a basic smart contract

03 **A test-network deployment** Module 2
Deploy to an Ethereum test network, optimize gas fees and apply security best practices

04 **Oracle-ready, audit-checked code** Module 3
Integrate external data with oracles, use advanced Solidity, and audit for common vulnerabilities

02 SYLLABUS

Three modules, contract to audit.

1 week to complete at 10 hours a week. Flexible schedule - learn at your own pace.

01 Fundamentals of Smart Contracts

5 hours

Definitions and history, platforms, and legal considerations

15 videos

BY THE END OF THIS MODULE YOU CAN

- Define smart contracts and trace their history and evolution
- Explain the key components and functions of a smart contract
- Compare platforms like Ethereum and EOS, and choose the right one
- Navigate legal considerations, compliance and regulation

CONTENTS: 15 videos (69 min) · 3 readings (90 min) · 4 assignments (105 min) · 1 plugin (15 min)

TOPICS: What are Smart Contracts? · Smart Contract Platforms · Legal and Regulatory Aspects · Quick Course Check-In (plugin)

You'll leave with: a clear picture of what smart contracts are, where they run, and the rules that apply to them.

02 Developing Smart Contracts

5 hours

Solidity, writing and testing, and deploying to Ethereum

15 videos

BY THE END OF THIS MODULE YOU CAN

- Explain the basics, key features and syntax of Solidity
- Set up a development environment and use development tools
- Write, test and debug a basic smart contract
- Deploy to an Ethereum test network and optimize gas fees

CONTENTS: 15 videos (84 min) · 3 readings (90 min) · 4 assignments (105 min)

TOPICS: Introduction to Solidity · Writing and Testing Smart Contracts · Deploying Smart Contracts

You'll leave with: the full workflow to write, test and deploy a smart contract to an Ethereum test network.

03

Advanced Smart Contract Concepts

Oracles, advanced Solidity, and security auditing

4 hours

13 videos

BY THE END OF THIS MODULE YOU CAN

- Explain what oracles are and integrate external data with smart contracts
- Use inheritance and libraries in Solidity
- Handle errors and exceptions, and apply gas optimization techniques
- Identify common vulnerabilities, use auditing tools and code securely

CONTENTS: 13 videos (56 min) · 3 readings (90 min) · 4 assignments (105 min)

TOPICS: Oracles and Smart Contract Integration | Advanced Solidity Programming | Smart Contract Security Auditing

You'll leave with: advanced Solidity patterns and an auditing mindset that make your contracts more robust and secure.

03 TOOLS & SKILLS

The stack that runs smart contracts.

Solidity — Core language

The most widely used language for smart contracts.

In this course: From basics and syntax to inheritance, libraries and errors.

Ethereum — Network

The platform your contracts are deployed to.

In this course: Deploy to a test network and manage gas fees.

Oracles — External data

The bridge that brings real-world data into contracts.

In this course: Integrate external data, with real use cases.

Auditing tools — Security

Tools and practices for finding vulnerabilities early.

In this course: Common vulnerabilities and secure coding practices.

SKILLS YOU LEAVE WITH

Fundamentals

- Smart contract structure & functions
- Platform evaluation
- Legal & regulatory compliance
- Use-case analysis

Development skills

- Solidity programming
- Testing & debugging
- Ethereum deployment
- Gas optimization

Security & advanced

- Oracle integration
- Inheritance & error handling
- Vulnerability assessment
- Auditing & secure coding

04 CERTIFICATE & CAREER

Finish with a shareable certificate.

Add it to LinkedIn
Add this credential to your LinkedIn profile, resume, or CV.

Share it anywhere
Share it on social media and in your performance review.

Earned, not attended
Awarded on completion of the graded quizzes in all three modules.

Course 1 of 3
Part of the Blockchain Technology Applied Specialization from Board Infinity.

WHERE THESE SKILLS ARE IN DEMAND

Smart Contract Developer · Blockchain Developer · DApp Developer · Smart Contract Auditor · Blockchain Security Analyst · Blockchain Consultant



Board Infinity
Instructor · Offered on Coursera

Beginner level · Taught in English · 7 languages available · Flexible schedule

Ready to write your first smart contract?

Enrollment, lessons, grading and the certificate all happen on Coursera.

Enroll on Coursera

Course page: coursera.org/learn/introduction-to-smart-contracts

Want a coach alongside the course?

Board Infinity 1:1 coaching is a separate, optional Board Infinity offering - it is not part of the Coursera course. Details: https://www.boardinfinity.com/career-coaching/

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