



# FULL STACK & BLOCKCHAIN COURSES

# Full Stack - Development



#### Become a Full Stack Developer with ASB's Certification Course!

Embark on a transformative journey into the dynamic world of technology with our Full-Stack Developer Course. In an era where versatility is the key, a Full-Stack Developer certification is your gateway to mastering both front-end and back-end technologies. Whether you are an experienced programmer looking to expand your skill set or a beginner eager to dive into the realm of web development, our comprehensive course is designed to equip you with the expertise needed to thrive in the ever-evolving technology landscape.

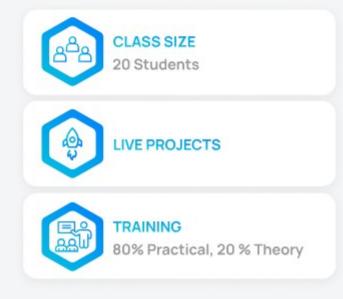
Our course covers a spectrum of programming languages, frameworks, and tools, ensuring you gain proficiency in creating robust and scalable solutions. Crafted by industry experts and seasoned developers, our curriculum is meticulously crafted to provide you with a well-rounded skill set to tackle real-world challenges.

Through hands-on projects, collaborative sessions, and mentorship, you will gain insights into best practices and industry trends that define successful development teams.

A global study reports that in 2023, full-stack and back-end developers were the most in-demand IT professionals. Developer jobs are expected to expand by 27% in 2024, according to the U.S. Bureau of Labor and Statistics.

# **Key Features**























# Syllabus / Curriculum



## Module 1 HTML Fundamentals

# 

HTML Structure Text Formatting Lists and List Items Links and Navigation

#### More HTML Elements

Forms Multimedia (Images, Audio, Video) Tables Semantic HTML (Header, Footer, Section, Article)

#### CSS Basics

Selectors and Properties Box Model Colors and Typography Backgrounds and Borders

# Layout Techniques

Flexbox Grid Layout CSS Floats (for historical context

# Responsive Design

Media Queries Responsive Layouts Mobile-First Design

#### Advanced CSS

Transitions and Animations
Transformations
Advanced Selectors (nth-child, pseudo-elements)

## CSS Preprocessors and Frameworks

Introduction to SASS/SCSS CSS Frameworks (e.g., Bootstrap)

#### Project and Portfolio Development

Build a Personal Project Create a Portfolio Website



# Module 2 How JavaScript Works

# ✓ JavaScript Basics

History and evolution
JavaScript in web development
Variables,Operators and Data Types
Primitive and reference data types
Conditional and Looping statements
String, Number,Date and Time Methods

# Functions and Objects

Functions in JavaScript
Function declaration and expressions
Parameters and return values
Arrays and Objects
Creating and manipulating objects

# Document Object Model (DOM) Manipulation

Understanding the DOM structure Accessing and modifying elements Events and Event Handling Handling user interactions, Form Validations Event listeners and callback functions

#### Asynchronous JavaScript

Introduction to Asynchronous Programming Callbacks and the callback hell Promises and the async/await syntax AJAX and Fetch API Making asynchronous requests Handling API responses

# Advanced JavaScript Concepts

Closures and Scope
Understanding lexical scope
Creating and using closures
ES6+ Features
Arrow functions, template literals, destructuring
Let and const, spread, and rest operators

#### Socket Programming

Project and Practice





#### Module 3

# Responsive web apps with React

#### Introduction to React

Understanding React and its role in web development Setting up a React development environment JSX syntax and its relationship with JavaScript

## Components and Props

Creating functional and class components Understanding props and state Component lifecycle methods

#### State and Events

Managing state in React components Handling events in React Form handling and controlled components

#### React Router

Introduction to React Router for Navigation Setting up routes and navigation in a React application

## Styling in React

CSS-in-JS libraries (e.g., styled-components) Theming and styling best practices in React

#### State Management

Introduction to State Management in React Context API for state management Global state with Redux (basic concepts)

## **O** Hooks

Understanding React Hooks (useState, useEffect, useContext, etc.)
Building custom hooks for reusability

#### Advanced React Patterns

Higher-Order Components (HOCs) Render Props Component composition patterns

#### Testing in React

Introduction to testing libraries (Jest, React Testing Library) Writing unit tests for React components

# Final Project and Optimization

Building a larger React project Performance optimization techniques



#### Module 4

# Dynamics Web Apps with Node.js & MongoDB

# Introduction to Node.js and MongoDB

Basics of Node.js and its event-driven architecture Install Node.js, npm (Node Package Manager), and MongoDB Connect Node.js to MongoDB: Install MongoDB driver Create a simple "Hello World" application with Node.js

# Building with Node.js

Node.js modules and the CommonJS pattern
Set up package.json for dependency management
Asynchronous JavaScript concepts in the context of Node.js
Work with file operations and the fs module using callbacks
Introduce Promises and the async/await syntax in Node.js

## S Express.js Framework

Introduction to Express.js for building web applications Create a basic web server with Express Explore routing and middleware concepts in Express

# APIs with Node.js, Express, and MongoDB

Design RESTful APIs using Express
Integrate MongoDB with Node.js using Mongoose
Connect Node.js to MongoDB: Establish connections.
Perform CRUD operations with MongoDB and Mongoose
Handle HTTP methods (GET. POST, PUT. DELETE)

## Authentication and Authorization

Implement user authentication with Passport.js
Secure routes and implement access control
Use JSON Web Tokens (JWT) for stateless authentication
Apply authentication and authorization concepts.

# Testing and Debugging

Introduction to testing frameworks (e.g., Mocha, Chai)
Write unit tests for Node.js applications
Mocking and stubbing techniques in testing
Debug and troubleshoot Node.js and MongoDB applications

# Real-time Applications with Socket.io

Introduction to real-time communication
Build a real-time chat application with Socket.io
Handle events and broadcasting in Socket.io with MongoDB

#### Full-Stack Development

Integrate Node.js with a frontend framework Build a complete full-stack application Certificate.



On successful completion of the programme, you will earn a coveted certificate as Antier School of Blockchain.

ASB Future of Web3 Education
CERTIFICATE OF COMPLETION
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In Recognition Of Your Successful Completion Of Certificate In Full Stack Development. Your Hard Work, Dedication, And Commitment To Learning Have Enabled You To Achieve This Milestone, And We Are Proud To Recognize Your Accomplishment.
Date Signature

<sup>\*</sup> The Certificate shown above is for indicative purpose only. The actual certificate may vary.



# Internship and Placement Opportunity on Successful Completion.

# Career Options After Course Completion.

- Business Analysts
- Product Managers
- **Entrepreneurs**
- Project Managers and Team Leads
- Professionals Working with Managerial, Strategic, or Operational Functions
- ✓ Developers and Software Engineers
- Technology Leaders





## Become a Certified Blockchain Expert With ASB's Blockchain Certification Course.

Get prepared for the business revolution with our blockchain certification program. In this **blockchain** certification course, participants can delve deep into the blockchain technology and learn directly from practical applications of the technology. ASB is proud to present this first-of-its-kind blockchain technology certification program that allows professionals to unlock the future of their careers or business.

ASB's blockchain certification program gives you the tools to discern the applicability of blockchain technology to any given business model. Study how digital assets use blockchain to facilitate P2P transactions. Gain a solid understanding of the mechanics behind blockchain protocols and discover how these can solve problems to support business goals.

Led by Antier and joined by leaders and industry experts from blockchain and Al startups, investment firms, and other leading institutions, this certification program gives you knowledgeable content and relevant frameworks so you can drive innovation using blockchain technology.

About 83% of global suppliers, business partners, competitors, and customers are talking about working with digital assets and moving to blockchain in context to their strategies or solutions. Although blockchain has been synonymous with digital assets, its applications and use cases go far beyond financial transactions.

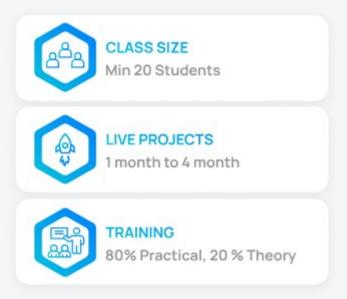
395%

Growth of blockchain-related jobs in 2021 \$176 Billion

Business value-add that blockchain is estimated to contribute by 2025

# **Key Features**





# Tools You Will Learn















# Syllabus / Curriculum



#### Module 1

# **Building Blocks of Blockchain**

- Blockchain as a Career
- Introduction to Blockchain+ Digital Signatures
- Concept of Hashing +
   Merkle Tree + Hash Cash
- Cocept of Networking TCP/IP
   + Peer to Peer
- Combining the Foundation of Technologies to form Blockchain Ecosystem



#### Module 2

## **Blockchain Beyond Basics**

- Introducing types of Blockchain + Bitcoin Blockchain
- Introducing Ethereum Blockchain + Concept of Private Blockchain
- Introduction to Smart Contract + Web3 development tools
- Introduction to Solidity + Smart
   Contract Terminologies + Gas Fees
   Optimization
- Loops, Operators, and Advanced
   Data Structures



#### Module 3

# **Smart Contract Development**

- Concept of ERC 20 + Creation of Token in EVM Compatible Blockchain
- Creation of Own Token Advanced
- Creating a Staking Platform
- Advanced Concepts of Staking Platform
- Introduction to Hardhat and Foundry Frameworks (Smart Contract Frameworks)



#### Module 4

# Non-Fungible Tokens

- Introduction to NFT Standard ERC721 + IPFS & Pinata
- Advanced Test Cases
- Hands on training on Testing Scripts and Deployment Scripts
- Exploring Blockchain Explorers and Open Sea + Concept of ERC1155

# Syllabus / Curriculum





# Module 5 Case study

- Understanding Various Use Cases of Blockchain- Launchpad, Staking Platforms
- Understanding Various Use Cases of Blockchain - NFT Marketplaces, DEX
- Understanding Various Use Cases of Blockchain - STO, Decentralized Lottery Platforms
- Understanding Various Use Cases of Blockchain - Supply Chain
- Understanding Vaious Use Case of Blockchain: Healthcare



# Module 6 Testing and Audits

- Workshop for Writing, Compiling, and Deploying of a Smart Contract
- Post Deployment Writing Complete Test Suite
- Testing on Remix and Monitoring Transaction on Explorer
- Smart Contract Auditing Best Practices

Certificate.



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- Solution Architects
- Product Managers
- **Solution** Entrepreneurs
- Project Managers and Team Leads
- Professionals Working with Managerial, Strategic, or Operational Functions
- Developers and Software Engineers



# Full Stack & Blockchain Development - Online Courses



#### We provide both offline and online courses.

If you are unable to take our classroom courses, you can always opt for them in **online mode**. Whether you are a tech enthusiast, a professional, or an entrepreneur eager to upgrade your skills for the future tech industry, you can have the complete course available anywhere at the click of your smartphone!

With our Online courses for blockchain and full-stack development, we impart learning beyond the classrooms, letting you access our storehouse of knowledge at your fingertips.



# Flexibility and Learning at your own pace

Our online courses allow you to set your schedule, making it convenient for working professionals and students alike.



#### Interactive Learning

You can interact with your peers and our trainers, via live online lectures and engage in active learning through hands-on tasks



#### Breaking the barriers of geographical limitations

You can access our courses from anywhere in the world with an internet connection.



#### 24/7 Availability

Our course materials are available 24/7, giving you the freedom to study whenever it suits you best.

#### How It Works:

Enrollment: Choose your desired course and enroll online. The process is simple and can be completed in a few clicks.

Access Course Materials: Once enrolled, you can gain instant access to our online learning platform.

Navigate through modules, download supplementary resources, and stay informed of the timing of live classes.

**Engage with Instructors:** Interact with experienced instructors through online classes, doubt sessions, webinars, and Q&A sessions. Get your queries answered and learn from industry experts.

Practice Hands-on Projects: You will be assigned real-world projects and assignments to work on. With this, you will be able to test your knowledge in industrial scenarios.

**Earn Certification:** After successfully completing the course, you will receive a verified certificate to showcase your achievements.

Placement Assistance: The toppers will also have the advantage of placement support and further career assistance.

**Embark on Your Learning Journey Today!** 





VIKRAM R SINGH
CEO
Founder, Antier Solutions.



SHASHI PAL Chief Operating Officer



VISHAL SHARMA Head - Learning & Development



ANKIT BHATIA
Chief Training Officer/
Technical Project Manager



AJAY MITTAL

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Advisor And Mentor



KARAN BHAI Head - Business Intelligence



VISHAL SHARMA Software Developer Cum Trainer



UDAYVEER SINGH Lead Trainer B.Tech, CSE



SAURABH KAWATRA
Technical Software
Trainer



GAGANDEEP SINGH
Product Head



Best-in-Class Blockchain Industry Experts





# Certificate Programs in

# Full Stack Development & Blockchain

