3 FULL STACK CURRICULUM

Software Development
Full-Time Online

16+ weeks, 70-90 hours/week

Full-Time class commitment
Career Path Focus built into curriculum
Learn by Doing real projects, real datasets

Join our 13,000+ global alumni and kickstart your career path in tech.
Program Overview

Your career path into software development begins on your first day of class. Within 16 weeks, you'll study to become a self-sufficient, versatile developer who has the critical skills to pursue a career path in tech.

Anyone can learn to code, but the path to becoming a developer isn't easy. Most successful students dedicate 70-90 hours/week to bootcamp diving deep into their studies and building friendships along the way.

You'll start coding from day one. At Coding Dojo, our learning environment fosters collaboration and deep learning; not competition.

Up Next: The Whole Curriculum
The Whole Curriculum

Week One
Programming Basics
To kick off the program, you’ll explore habits, computer basics, and fundamental programming concepts and skills necessary to be successful in your bootcamp!

Weeks Two to Four
Web Fundamentals
You’ll then move to Web Fundamentals—a three week course that starts with the basics to provide a good overview before jumping into specific languages.

Weeks Five to Eight
Python Full Stack
We’ll then dive into our first full stack language: Python. We’ll start slow with small projects, then work our way up to designing a full framework project with your instructor and classmates.

Weeks Nine to Twelve
Javascript Full Stack
Mid-program, we’ll start on Javascript—You’ll examine a wide-range of applicable formats and projects to help you get ready for real-world application.

Weeks Thirteen to Sixteen
Java Full Stack or C#/.NET Stack
At the very end, you’ll make a choice to study Java or C#/.NET the last four weeks of the course.

What You’ll Focus On:
- Basic computer literacy
- Algorithmic foundations
- Learning stamina

What You’ll Focus On:
- HTML
- CSS
- Git/Github
- jQuery (optional)
- Wire-framing (optional)

What You’ll Focus On:
- Python Fundamentals
- Python OOP
- MySQL
- Flask
- MVC
- Deployment

What You’ll Focus On:
- JavaScript
- Node.js
- Express.js
- Socket.io
- MongoDB
- React
- Deployment

What You’ll Focus On (Java):
- Java
- Java Fundamentals
- Java OOP
- Java Web Development
- Java Spring
- Deployment

OR

What You’ll Focus On (C#/.NET):
- C#/.NET
- C# Fundamentals
- C# OOP
- ASP.NET Core
- Object Relational Mapping (ORM)
- Identity Framework Core
- Deployment
An Example Day’s Schedule in a Full-Time Program

**Morning**
- 8:50 AM - 9 AM Login to Zoom session for morning Algorithms
- 10 AM Recap Algos & Discussion Lecture
- 11 AM Group Activities & Setting the Day’s Expectations

**Mid-Morning**
- 12 PM Enjoy lunch!
- 1 PM - 5 PM Labs including demos, code reviews, and extra sessions

24/7 Cohort Access
Your access to our LEARN Platform and Discord is available 24/7. Access your materials at whatever time you need them.

**Self Study**
Most students dedicate 70-90 hours a week to self-study, though you may need more or less depending on your learning style and experience.

**Lectures**
Live participation is held
- **Monday - Friday** from 9am - 5pm MST. Students should plan for 12+ hour days with 8 hours of instruction.

**Evening**
- Additional Assignments & Self-Study
- 5 PM - 9 PM Complete daily assignments, read lessons for following day

Optional Office Hours
Need more assistance understanding a concept? Optional office hours are held Monday - Friday when class is in session an hour prior to the morning kickoff between 8am - 9am MST.
Let’s Dive Into the Stacks!

What does stack mean?
A stack refers to a programming language, and when we refer to ‘full stack’, we mean you’ll study every facet of that programming language.

**Stack One: Python**
Python is one of the most popular languages in the industry\(^1\). Its diversity, adaptability, and easy-to-master basics makes it the perfect language to start with at bootcamp.

**What Python is used for:**
- Web Applications
- Web Development
- Machine Learning
- Data Science
- Cloud Infrastructure

**Stack Two: Javascript**
JavaScript is ideal for building dynamic websites and applications. It runs on every application level making it an efficient, modern approach to web development.

**What Javascript is used for:**
- Web Applications
- Mobile Applications
- Game Development
- Web Servers
- Animation

**Stack Three: Java or C#/.NET**
Java is a high-level language which revolutionized language development post-release.

**What Java is used for:**
- Web Applications
- Mobile Applications
- Game Development
- Web Servers

**C#/.NET (as an optional third stack)**
C#/.NET covers both the programming language C# and the .NET Framework which is an application framework library. It’s extremely versatile, making the language popular for writing desktop apps, background services, and apps.

**What C#/.NET is used for:**
- Web Services Applications
- Client-Server Applications
- Console Applications
- Web Applications
- Games

[1](https://www.tiobe.com/tiobe-index/) (Visited 3/9/2023)
Programming Basics

To kick off the program, you’ll examine habits, computer basics, and fundamental programming concepts and skills necessary to be successful in your bootcamp! During this section, students study basic computer literacy skills, such as how to install and navigate basic programming tools. Students apply algorithmic thinking to make predictions of common programming skills, such as variables, arrays, conditionals, functions, and loops.

Additionally, students experience the rigor and intensity of the bootcamp, strengthening their cognitive processing stamina, resiliency, and other behavioral skills necessary for a bootcamp. By the end of the course, students should walk away with the basic computer literacy, algorithmic foundations, and learning stamina needed to find success in a bootcamp.
Web Fundamentals
Front-End Development & The Web

HTML
Intro to HTML
- Basic Nesting Practices, Indentation
- The Head & Body
- Body Tags (lists, tables, etc.)
- Building Forms & Declaring Input Values
- Containers, Elements, Attributes, & Classes

Javascript
- Functions & Debugging
- Event handling
- Parameters
- Implementing Dynamic Content
- Traversing DOM Elements

jQuery*
Intro to jQuery
- jQuery Functions
- Essentials of the jQuery Library

CSS
Intro to CSS
- CSS Selectors & Declarations
- Inspecting Element
- Inline, Block, Float, and Positioning
- Div Layout & Formatting
- Styling Text & How Fonts Work
- Using Properties & Backgrounds
- Replicating Complete User Interfaces

More Styling*
- Intro to Bootstrap

Responsive Web Design*
Intro to Responsive Web Design (RWD)
- Breakpoints, Units, & Media Queries
- Basics to Typesetting & Scaling
- Cross-device RWD
- Grid System, Fluid Grids, & Adaptive Layouts

CSS Frameworks
- Responsive Typography
- Using CSS Reset & Boilerpoint

Git/Github
Git & Version Control
- Using Terminal Commands*
- How to Create & Utilize a Repository
- Git Workflow Overview & States*

Github
- How to Use a Github Repository

*Optional Topics

Up Next: Python
Python
Stack One: Full Stack Development

Python
Intro to Python
- Variables, Data Types & Best Practices
- Using Strings & Built-In String Functions
- List Creation & Manipulation
- Dictionaries in Python
- Nested Dictionaries & Lists
- Conditionals, Operators, & Nested Loops
- Functions in Python

Python OOP
Intro to Object Oriented Programming
- Classes, Constructors and Creating Object Instances
- Setting and Updating Attributes
- Adding and Using Methods
- Chaining Methods
- Implementing Static and Class Methods
- Setting Up Associations Between Classes
- How to Use Modules & Packages in Python
- Introduction to Inheritance, Polymorphism, Encapsulation and Abstraction

Python Test Driven Development (TDD)*
- Unit Testing in Python & Outcome
- How to Use Assertions
- TDD Methods: setUp & tearDown

Advanced Python
- Variable Length Arguments
- Ternary Operators in Python
- Using Anonymous Functions (Lambdas) in Python

MySQL
Intro to MySQL
- Database Design & Relationships
- Entity Relationship Diagrams (ERDs)
- Conventions & Common Data Types
- Normalization
- Basic MySQL Queries for CRUD
- MySQL Functions
- Joins

Flask
Intro to Flask
- Routing in Flask Applications
- Building & Using Forms
- Rendering Templates & View
- Delivering Static Content
- The Different HTTP Methods
- Implementing Cookies & Session
- Hidden Inputs & Form Validation

Flask w/ MySQL
- Using PyMySQL to Connect to a Database
- Basic Data Security
- SQL Injection, Hashing Passwords & Bcrypt
- Back-end Validation and User Authentication Logic

MVC
- Creating the MVC Design Pattern in Flask
- Modularization, Using Models & Controllers
- Building Full-Stack Flask Applications

Deployment
- Amazon Web Services (EC2)
- Linux

AJAX*
- Fetching Data and Parsing JSON
- Using External APIs and API Keys
- Sending JSON Responses to the Client
- Intro to Asynchronous vs Synchronous Execution
- Manipulating the DOM to Display Dynamic Data

*Optional Topics
Java

Stack Three: Full Stack Development

**Java Fundamentals**

* Intro to Java
  * Java Development Kit Installation
  * Executing Java Programs
  * Variables, Data Types, & Type Casting
  * Control Structures & Exceptions

**Java OOP**

* Intro to Object Oriented Programming
  * Creating Objects & Classes
  * Methods, Member Variables & Constructors
  * Overloading & this
  * Inheritance & Packages

**Advanced Java OOP**

* Use of Static
  * Interfaces & Abstract Classes
  * Annotations
  * Java Beans

**Data Structures**

* Doubly Linked Lists
  * Tries

**Java Spring**

* Spring Intro
  * Routing
  * Java Server Pages
  * Session
  * Form Submission
  * GET vs POST
  * Dependency Injection

**Spring MVC**

* Model, View, and Controller (MVC) Design Pattern
  * Java Persistence API (JPA)
  * MySQL Connections
  * Persistent Model Annotations
  * Relationships
  * Advanced Queries

**Spring Security**

* Spring Security Overview
  * Authentication & Authorization
  * Servlet API Integration
  * Spring MVC Integration

**Deployment**

* Amazon Web Services (EC2)

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*Optional Topics*
C#/.NET
Optional Stack Three, in Place of Java

C# Fundamentals
Intro to C#
- .NET Console Applications
- Variables, Types, Type Casting, & Functions
- Control Structures
- Debugging .NET Applications (VS Code)

C# OOP
Intro to Object Oriented Programming
- Classes & Objects
- Access Modifiers
- Inheritance & Polymorphism
- Encapsulation with Properties

Advanced C# OOP
- Interfaces
- Abstract Classes

ASP.NET Core
- Dependency Injection with ASP Services
- MVC Architecture
- Razor
- ViewModels
- Custom User Authentication/Authorization

Object Relational Mapping (ORM)
Working with ORMs
- LINQ
- Entity Framework Core
- User Authentication/Authorization
- Identity Roles

Deployment
- Amazon Web Services (EC2)
- Production Environments
- Hosting with Nginx/Supervisor

Up Next: Career Services
Career Services

**Lifetime career services support.** Our experienced Career Services team provides guidance, strategy, and prep to help you in your job search whether it’s post-graduation or later down the road.

1. **Professional Profile & Portfolio Building**
   From day one, gain access to your Career Services Manager who will begin to guide you into creating your digital footprint, learning skills companies seek, and building a profile that communicates those points to recruiters. Milestones:
   - LinkedIn profile creation and optimization
   - Github Portfolio Production
   - Resume Development & Curation

2. **Job Prospecting & Application Guidance**
   All while learning the most popular programs in tech, you’ll be working on your job search for when graduation approaches. Your Career Service Manager will work with you on potential job titles to seek, explain different role descriptions, and guide you on how a first job post-bootcamp work can help you toward your long-term career goals. Milestones:
   - Real Job Search
   - Sample Applications
   - Hiring Manager Communication
   - Job Title Refinement

3. **Interview Prep & Negotiation**
   One of the largest complaints by tech recruiters is it’s easy to find people who can code, perform data analysis, and can set up a Cybersecurity framework, but most of these people can’t communicate or work in teams. Whether you’re an introvert or a natural leader, our Career Services team will help you to show up as your best self in essential interviews and your day-to-day work. Milestones:
   - Mock Job Interviews
   - Technical Job Skills Tests
   - Target Compensation Management
   - Contract Negotiation

Coding Dojo cannot guarantee employment, salary or career advancement.
Industry Trends

Projected Employment Growth for Software Developers*
Between 2021-31

25%

$120,730
Median Annual Wage
for Software Developers*

How to Enroll

Do Your Research
- Explore our programs on our website and view other program overviews.
- Schedule a call with one of our Admissions Advisors who will talk through your future career goals and what program may best suit you.
- Attend an Open House to meet directly with our Instruction and Career Service Managers.

Submit Application
- Submit your application! The application process takes less than 5 minutes and does not include a technical assessment.
- Complete a quick 30-minute interview with our Admissions team.
- Receive your decision within 2-3 business days.

Explore Financing Options
- Our Admissions Advisors will help you explore our financing options.
- Coding Dojo offers a variety of payment options, financing partners, and partial-scholarships for those who qualify.

Finalize Your Enrollment
- Submit your deposit, confirm your financing, and sign your Enrollment Agreement to reserve your seat in class!
- Your Admissions Advisor will introduce you to your Student Experience Manager who will help you get ready to start bootcamp.

Up Next: Financing Options
Financing Options

**Installment Plans**
Spread tuition payments out over your course with customizable installment plans.

**Third-Party Financing**
Finance your bootcamp with a third-party loan from a variety of vendors or source your own.

**Pay in Full**
Pay your tuition in full and get started.

Schedule a call with an Admissions Advisor to discuss which payment or financing option is right for you.