Full-Time Syllabus

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Full Stack Development Track
Python + React/JS

Ready to Apply?

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Full Stack Development

Python + React/JS Track

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BOTTEGA

Track Description

This comprehensive full stack development track focuses on teaching Python and React; two of the industry's leading languages for job demand, and projected growth.

Students learn the fundamentals of computer programming, gain a greater understanding of object-oriented programming, and learn modern front-end and design principles.

Track Key Competencies

- Web Development Foundations
- OOP Foundations (Python)
- OOP Advanced Skills (Python)
- Adv. Web Development (React/JS)
- Database Foundations
- Developer Soft Skills
- Job Preparation

Track Materials

- Bottega's top-of-the-line learning management system (LMS), DevCamp, provides a dynamic learning experience by delivering learning materials and interaction for every student's success; our curriculum targets the skills necessary for real world application.
- Students must have access to a desktop or laptop (preferably Mac) that is less than 3 years old, 2.7 GHz/i5 - i5 processor and has 8 GB of RAM and 500 GB SSHD *No exceptions*. Students connecting remotely need access to a web cam and microphone for remote conferencing.
- Stable, high-speed internet and secondary monitors are helpful.

Grading System

- 450 – 500 points = A
- 400 – 449 points = B
- 350 – 399 points = C
- 300 – 349 points = D
- Below 299 points = F

Time To Complete

Full Time

- Video Viewing: 700+
- Assigned Projects: 15
- FT In-Class Projects: 4+
- Examinations: 2

`FT Total Hours: 600`

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Curriculum Overview

CS 277
Intro to Programming (Python)

Introduces fundamental concepts of computer programming; such as structure, syntax, problem solving, data types, decision logic, loops, functions, arrays, and more.

Recommended 3.0 Credits

CS 384
Advanced Python Development

Covers advanced Python concepts, such as: scripting, dynamic typing, iterators, generators, coroutines, modules, packages and scope, runtime services, data wrangling, etc.

Recommended 3.0 Credits

CS 301
Front End Foundations (JavaScript)

Covers design and development of browser-based programs; teaching generation of HTML via JavaScript, debugging, web server communication, and use of XML and JSON.

Recommended 3.0 Credits

CS 382
Database Foundations

Introduces theory, concepts, architecture, and use of database management systems (DBMS). Presents common database models and languages used in both local and client/server databases.

Recommended 3.0 Credits

CS 497
Advanced Web Development (React)

Development of complex web applications, Including: web security, data markup languages, server side scripting, web database interactions, web service architectures, etc.

Recommended 3.0 Credits

Python + React/JS

Recommended 15 Credits

Python

A object-oriented programming language that empowers both novice and experienced programmers to create a wide variety of application types.

React/JS

A powerful javascript library that handles data dynamically and aims to provide speed, simplicity, and scalability to user interfaces.

Track Itinerary

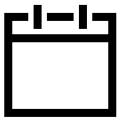
Full-Time Program

Track Breakdown

Pre-Work
(Prerequisite) Course

Python + React/JS

15+ Projects



12 Weeks

Instructor Led

40+ Hours
Per Week

600 Hours
To Complete

1:3

Instruction : Application

Students that enroll in the full-time program will attend instructor-led classes that have a ratio of 1 hour of devCamp curriculum to 3 hours of application minimum. Application consists of: project building, code submissions, note-taking, code alongs, in-class assigments, mentor sessions, additional reading, review, homework, etc.

12

Weeks To Graduate

This 600 total hour track that students must complete includes an introductory “pre-work” course and the full stack python + react software development track. Students undergo intense and immersive training in modern coding techniques and job readiness training.

Program Expectations

Daily Schedule

9:00 am
Class Starts

9:30 am
Daily Challenge

10:15 am
Morning Break

10:30 am
Lecture/Coding

12:00 pm
Lunch Time

1:10 pm
Lecture/Coding

3:00 pm
Afternoon Break

3:15 pm
Lecture/Coding

4:30 pm
Project Lab

5:00 pm
Class Ends

Come Prepared

During this course you will live and breathe code. This course was designed to be fully immersive—challenging your skills and abilities—and it constantly builds off of the knowledge you obtain in the days and weeks prior.

Our goal is to enable you to meet new challenges head on, with skills and learning opportunities meticulously chosen based on industry expectations and hiring standards.

We understand certain priorities exist in life, however showing up late, tired, or mentally unprepared to learn will severely limit your ability to learn the concepts and technologies within the course material.

Channel your inner boy- or girl-scout and come prepared!

Teaching Strategies

As a blended learning course, teaching methods include skill demonstration through: audio visual materials, case studies, practical exercises, discussion, learner presentations, classroom exercises, laboratory, lecture, and computer-based training.

Attendance Policy

Passing the class requires a 95% attendance and full participation, including but not limited to: completion of assigned homework, participation in challenges, syllabus work, group activities, job preparation, and interview availability.

Assignments & Grades

Students must complete class assignments, quizzes, tests, and projects as assigned by the course facilitator.

Overall grade must be a minimum of 70% (C) in order to earn credit for the course.

*Part-Time expectations vary slightly and will be discussed in your new student orientation.

Full-Time Itinerary

Week 1

Curriculum Topics

- Intro to SCSS
- SCSS Basics
- SCSS Mixins
- Advanced SCSS
- CSS Grid Basics
- UX For Developers
- UI For Developers
- Intro To Python

Projects

- Flexbox Mixin (SCSS)
- Search Engine Site (Front End)
- Flexbox Capstone (CSS)
- Portfolio Website (UX)
- In-Class Assignments

Week 2

Curriculum Topics

- Python Data Structures
- Python Loops
- Python Conditionals
- Python Methods and Functions

Projects

- HTML Generator In JavaScript
- Fizz Buzz in Python
- Python Coding Exercises
- In-Class Assignments

Week 3

Curriculum Topics

- Importing Modules In Python
- OOP in Python
- API Development
- Mongo Databases
- JavaScript(JS) Basics
- JS Conditionals
- JS Functions
- JS Arrays and Data Structure
- JS Loops and Iterators
- Modern JS Development

Projects

- Web Scraper in Python
- Mongo Database Management
- JS Coding Exercises
- Hello World Application in Flask
- In-Class Assignments

Week 4

Curriculum Topics

- Modern JS Development
- OOP in JavaScript (JS)
- JS Promises
- JS Async and Await
- Modern JS Tools
- Error Mgmt. in JS
- JS Modules
- JS Package Mgmt.
- Git Basics
- Git Branches
- Git Conflicts
- Git Reverting workflows
- Intro to JS in the Browser
- JS and the DOM

Projects

- Create/Delete List Items (JS)
- In-Class Assignments

Week 5

Curriculum Topics

- JS Browser Tools
- React Tutorial
- Intro and Setup for React
- React Components
- State in React
- Working with Git

Projects

- React Madlib Application
- Refactoring Date Picker (JS)
- Dinner Menu (React/JS)
- In-Class Assignments

Week 6

Curriculum Topics

- App in a Day Thursday
- Deploy to Heroku
- Vanilla JS
- CSS Grid
- React Routes
- React Routes
- Setting Up Redux
- Redux DevTools

Projects

- API Search Engine (React/JS)
- Group Project (React)
- In-Class Assignments

Week 7

Curriculum Topics

- In class review for first 2 days
- SQL System Config
- SQL Creating, Reading, Updating and Deleting
- SQL Advanced Queries
- SQL Functions
- SQL Control Flow
- SQL Relational Queries
- SQL Advanced
- Redis Install
- Redis Commands
- Redis Hashes

Projects

- University SQL Database – SQL
- Build Redis Database – Redis
- In-Class Assignments

Week 8

Curriculum Topics

- Job Preparation
- Refractor CSS Grid
- Bug Fixes
- Form Data in React
- Map Data To a Form
- Parse a Date in JS
- Redux in the App
- Reusing React Components
- Button Animations CSS

Projects

- Property Management App (React/JS)
- In-Class Assigments

Week 9

Curriculum Topics

- Mock Interviews
- Resume Preparation
- Creating React Components
- Build Header and Nav Bar
- Building a Sign Up Form
- Creating Routes
- Building The Cart

Projects

- eCommerce Shop – React/JS
- In-Class Assignments

Week 10

Curriculum Topics

- Mock Interviews
- Resume Preparation
- Creating Components
- Add Products to a Cart
- Building Payment Forms
- JSX for Shipping Form
- Working with Sign In Data

Projects

- eCommerce Shop (React/JS)
- In-Class Assignments

Week 11

Curriculum Topics

- Job Preparation
- Mock Interviews
- Python Review
- Whiteboarding
- About Me's
- React/Redux Review
- Group Projects

Projects

- Personal Capstone Project
- In-Class Assignments

Week 12

Curriculum Topics

- Job Preparation
- Mock Interviews
- Vocab Review
- JavaScript Review
- App in a Day Planning
- Whiteboarding
- Graduation

Projects

- Personal Capstone Project
- App in a Day
- In-Class Assignments