

Module 1

Data Structures

- Stacks and Queues
- Linked Lists
- Binary Search Trees

HTML and CSS

- CSS Selectors
- Box Diagramming
- Flexbox

Collaboration

- Pair Programming
- Git Concepts and Techniques
- Practical JavaScript Debugging

The DOM

- Intro to the DOM
- DOM Nodes and Selectors
- DOM Events and Listeners

Module 2

Algorithms & Analysis

- Time Complexity
- Asymptotic Notation

Node

- Node & Asynchronicity
- Express.JS
- Connecting to Databases (PG & ORMs)

Databases

- Intro to Databases
- PostgreSQL
- Schema Design
- SQL Language

Module 3

Promises

- Promises/Async Containers

Full Stack Architecture

- Advanced Express and Sequelize
- Client-Server Architecture
- Front-End Module Builders

Single Page Applications

- Single Page Applications
- AJAX

React

- React Fundamentals
- State and Props
- Component Lifecycle

Module 4

Pillars Checkpoint

Testing

- Test Libraries
- Test Practices
- Asynchronous Testing
- Testing with Side Effects
 - Spies
 - Mocks
 - Stubs
- Fullstack Testing

React Ecosystem

- React Router
- React Forms

Sockets

- Websockets and Socket.io

Module 5

Functional Programming

- Programming Paradigms
- Composition
- Pure Functions
- Immutable Data Structures

React Design Patterns

- Render Props
- Component Composition
- Higher Order Components

Redux

- Redux Concepts and Use Cases
- Thinking in Redux
- Combining Reducers
- Redux Middleware
- Redux + React

Module 6

Sessions & Auth

- Express Session
- Login/Logout
- Passport Middleware
- Oauth

Security Fundamentals

- Common Security Vulnerabilities
- Web Security Fundamentals

Deployment

- Deployment and Heroku

Senior Gateway

- Senior Enrichment Project
- Senior Checkpoint