



Full Stack Web Development

# SYLLABUS

## Syllabus

### Pre-boot camp training (40 hour)

- Understand how websites work and how HTML, CSS, and JavaScript contribute.
- Understand how the internet works.
- Start coding with HTML, CSS, and JavaScript.
- Learn and understand git, GitHub and version control.
- Use the Unix command line to become a power user and
- Write bash commands.
- Learn key troubleshooting and debugging skills to apply to your projects.

- **Foundation course (160 hour)**

After the pre-boot camp training or the students who know the basics of programming will get enrolled in phase 1 of this course. This initial course will prepare them for the upcoming stages of the boot camp.

### HTML 5

- Learn the anatomy of HTML syntax to structure your websites.
- Understand the HTML boilerplate and HTML doctypes
- How to structure text in HTML
- How to structure HTML lists to create unordered and ordered lists.
- How to insert images using HTML
- How to create hyperlinks using anchor tags.
- Understand how to use HTML tables for content.
- How to use tables for layout.
- Learn HTML best practices.
- Understand HTML forms and create a simple contact me form.

- HTML Divs and how to separate content for CSS styling.

## **CSS**

- Understand what are cascading style sheets and how you can use them to style your website.
- How to use CSS selectors and properties.
- Learn about how to use inline, internal and external CSS.
- Understand CSS coding best practices.
- Learn the anatomy of CSS syntax and structure.
- CSS specificity and implementing style hierarchy.
- Class vs. Ids and how to target each.
- CSS display and how to implement the layout.
- How to use CSS static, relative, and absolute positioning systems.
- Font styling using CSS and web-safe fonts.
- Centering elements using CSS.

## **JavaScript ES6**

- The Fundamentals of Code
- Starting code with alerts and prompts.
- Understand Variables and Data Types in JavaScript
- Variable naming in JS
- Working with strings and numbers
- Randomization and logical operators
- Loops, collections, and Conditionals.
- Functions and invocation patterns
- Discussion of ECMAScripts
- Intermediate JavaScript
- Learn to use JS Expressions, Operators, Statements, and Declarations
- Object-Oriented Programming
- JS Objects and Prototypes
- `This`, Scope and Closures
- Objects and Prototypes
- Refactoring and Debugging



## Intermediate course

### Bootstrap 4

- Learn the fundamentals of implementing responsive web design.
- How to use Balsamiq to mockup and wireframe websites.
- The fundamentals of UI design for websites.
- How to install the Bootstrap framework.
- Understanding the Bootstrap grid layout system.
- How to use bootstrap containers to layout your website easily.
- Learn to use other Bootstrap components such as buttons.
- Adding symbols using Font Awesome.
- Learn to use Bootstrap carousels.
- Add Bootstrap cards to your website.
- Using Bootstrap navigation bars.

### Document Object Model (DOM)

- Learn the tree structure of HTML-based websites.
- Traverse through the document using object notation.
- Separation of concerns and coding best practices.
- Manipulate and change the HTML elements using your
- Understanding of the DOM.

### J Query

- Installing and using the jQuery framework.
- Learning about jQuery functionality
- Introduction to functions in jQuery
- Manipulating text, styles and attributes with jQuery
- Create animations and customizations with jQuery
- Use your jQuery knowledge to make your website interactive
- Responding to user-initiated events with jQuery

### **The UNIX Command Line**

- How to use basic bash commands in a Unix/Linux Terminal.
- How to manipulate files and folders without needing a graphical user interface.
- How to download and install to your computer using command line.

### **Git GitHub and Version Control**

- Using git for version control and collaboration
- Git forking, branching, and cloning
- Using GitHub as a remote repository
- Checkout and rolling back changes with git
- Using git and GitHub with Xcode

### **Node.js**

- Explore the components of back-end development, working with an MVC framework
- Apply concepts like data types, objects, methods, object-oriented programming, and classes in the context of back-end development.
- Server-Side JavaScript
- Using Node on the command line
- NPM
- JavaScript Build Processes
- Event Loop and Emitters
- File System Interaction
- Modules
- Native Node drivers

### **Express.js**

- Understand how to install and use express in Node applications
- Creating Node and Express based servers
- RESTful Routing with Express



- Understand and use middleware for Node application

### **Application Program Interfaces (APIs)**

- Understand what APIs are and how they work.
- HTTP in Depth
- Calling APIs
- Reading API documentation
- Basic API Authentication
- Server to server communication
- JSON vs. XML, sending data over the wire

### **EJS**

- Understand what EJS does and how to use it with Node and Express.
- Templating with EJS
- Running code in EJS templates
- Passing data from server to template and vice versa
- Creating layouts/partials with EJS

## **Advanced course**

### **Database Fundamentals**

- Data Relationships
- Designing a Data Model
- Relational Databases
- Alternative Databases
- Entity Relationship Modelling (ERM) and Object Relational
- Mapping (ORM)

### **SQL databases**

- Working with Database Schemas
- Create-Read-Update-Destroy (CRUD)
- Database Joins
- Querying SQL databases



## **NoSQL Databases with MongoDB and Mongoose**

- Serialization
- How to model NoSQL data
- Document Databases (MongoDB)
- Create-Read-Update-Destroy (CRUD)
- NoSQL Best Practices
- Mongo Shell and command line use
- Installing MongoDB
- Mapping relationships with MongoDB
- Use an object-data modeling library (Mongoose) to work easily with your data.

## **Deployment**

- Understand hosting and deployment.
- Hosting static websites with GitHub Pages.
- Deploying server-based applications with Heroku.
- Deploying Databases with Mongo Atlas

## **Building RESTful APIs**

- Understand REST and guiding principles behind API design.
- Learn to work with a MongoDB GUI Robo 3T
- Implementing GET, POST, PUT, PATCH and DELETE by creating a public API from scratch.
- Understand and use chained route handlers from Express

## **Authentication and Security**

- Understand the need for authentication and keeping user details secure.
- Learn about Encryption and use encryption to keep your database secure.
- Learn and implement Hashing and Salting with bcrypt
- Using Sessions and Cookies to persist user login sessions.
- Setting up local authentication from scratch.

- Implementing Passport to authenticate users quickly and effectively.
- Understand and use environment variables to keep secret keys secure.
- Understand and use OAuth 2.0 to log in users using Google and Facebook

### **REACT.JS**

- Learn front-end development with React.
- Understand when and how to use React Components
- Learn to pass Props and work with them.
- Learn to write JSX and understand JSX syntax.
- Learn about the React DOM
- Learn State Management in React
- Learn about React Hooks
- Learn about conditional rendering in React.
- Understand the difference between class and functional components

### **Javascript ES6**

- Arrow Functions
- Map/Filter/Reduce
- Find/FindOne/FindIndex
- Import/Export and Modules
- Object and Array Destructuring
- Spread Operator



# FAQs

- **What is a coding bootcamp?**

Ans. A coding boot camp is an intense, accelerated school that aims to teach programming, generally over a course of a few months. The ultimate goal is usually to produce graduates who are skilled enough to be hired as software developers in the tech industry.

- **How a coding bootcamp is different from a college degree?**

Ans. Coding bootcamps are around 3 to 6 months long, intensive, teach you very practical, applicable, up-to-date skills, and give you career coaching, but are not usually accredited, so you do not get a qualification.

CS degrees are around 4 years long, cover in-depth theoretical material, teach you established programming practices, and provide you with a degree to show for it, but you will still need to prove your skills in a technical interview.

- **I am a beginner, can I join the coding bootcamp?**

Yes, for beginners we have a pre-bootcamp training programme of 4 weeks where we'll be covering the fundamentals of coding, thus making you prepared for fast-paced bootcamp training

- **What is the duration of the bootcamp?**

Ans. The bootcamp will be of 12 weeks duration, also there will be 4 weeks preparatory training program for beginners. The classes will begin from morning 0900hrs till 1800hrs (evening), for 5 days a week to prepare you to build a successful career as a developer.

- **Do you offer financial assistance to students?**

Ans. Yes we offer tuition fee waiver under our financial assistance program. To know more about it, reach out to us.

- **What is the course fee?**

Ans. The pre-bootcamp training for 1 month will costs Rs. 5000/- a month where all the basics will be covered as a preparatory course for the bootcamp.

The bootcamp fees will be Rs. 1,00,000/- for 3 months where an intensive training will be provided to prepare you for the career of your dreams

## **Coding Bootcamp**

Start your career as a software developer. The 12 week coding bootcamp will help you start your journey of becoming a successful developer or an entrepreneur.

## **Learn and Practice on the go!**

You'll start to learn and practice from the day one. You'll learn to build projects from scratch, learn to work with teams & gives you the education to find information for yourself and solve challenges your own

## **Anyone can learn to code!**

Gone are the times when coding was only for people with technical background, now anybody can take up coding as a hobby or develop as an additional skill to take your career to greater heights

If you dream of creating your own website or an app or a game, we are here to help in your learning journey. We provide courses and training designed specially to impart knowledge from scratch which will encourage you to create awesome software and apps on your own.



## **Time schedule of classes**

### **Coding as a hobby**

There will be a total of 30 hours of classes that will be provided in 4 weeks. The classes will be in the weekends and the timing will be from 9.00AM- 6.00PM

### **Coding as a career**

#### **Pre-bootcamp training**

There will be total of 100 hours of classes that will be carried out in 8 weeks. The classes will be in the weekends and the timing will be from 9.00AM- 6.00PM

#### **Full- Stack Development Bootcamp**

The bootcamp will be of 12 weeks (3 months) where classes will be conducted 5-days a week and timing will be from 9.00 AM- 6.00PM

**To know more about our programs or pricing,  
contact us at +91 9329722268**

