Full-Stack Web Development Beginner Course

Full-Stack Web Development Beginner Course (30 Minutes per Day)

Goal:  
Students gradually learn front-end (HTML, CSS, JavaScript) + back-end (Node.js, Firebase) basics in small, manageable steps.

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Week 1: HTML & CSS Basics

Day | Topic | Objective | Activity  
---|---|---|---  
Day 1 | Introduction to Web Development | Understand Front-end, Back-end, Full-stack | Short talk + Open a browser and inspect a webpage (Inspect Element).  
Day 2 | HTML Basics 1 | Learn about HTML tags | Create a basic webpage: <html>, <head>, <body>.  
Day 3 | HTML Basics 2 | Create content using headings and paragraphs | Students build a small article using <h1>, <p>.  
Day 4 | Adding Images and Links | How to add pictures and links to a website | Students add an image and a link to their page.  
Day 5 | Introduction to CSS | Add simple styles to HTML | Inline styles: change text color and background color.

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Week 2: CSS + Introduction to JavaScript

Day | Topic | Objective | Activity  
---|---|---|---  
Day 6 | CSS Styling 2 | External CSS file basics | Students create a .css file and link it to their page.  
Day 7 | CSS Practice | Practice Layout: margins, padding, borders | Students style their profile page.  
Day 8 | Introduction to JavaScript | What is JS? How to add a <script> tag | Students create a button and trigger an alert.  
Day 9 | Variables and Data Types | Understand JS variables | Students declare variables: strings, numbers.  
Day 10 | Functions and Events | What is a function? Button events | Button click that changes the page background color.

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Week 3: JavaScript DOM Manipulation

Day | Topic | Objective | Activity  
---|---|---|---  
Day 11 | The DOM | Understanding how JS interacts with HTML | Use document.getElementById() to change text.  
Day 12 | Event Listeners | Add interactivity | Build a "Hide/Show" paragraph button.  
Day 13 | Mini Project | Interactive Profile Page | Add buttons that update parts of the profile (bio, image, etc.).  
Day 14 | Review and Practice | Practice DOM | Students finish any missing tasks.  
Day 15 | Simple Quiz | Short 5-question quiz on HTML, CSS, JS | Quick test + Review answers together.

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Week 4: Node.js Basics

Day | Topic | Objective | Activity  
---|---|---|---  
Day 16 | What is Node.js? | Install Node.js, intro to servers | Install Node and write console.log("Hello Node").  
Day 17 | First Node.js Server | Create a server | Basic server that responds "Hello World".  
Day 18 | Serving HTML with Node.js | Serve a file instead of plain text | Modify server to load HTML.  
Day 19 | NPM Introduction | Install simple npm packages | Install and use a small package like nodemon.  
Day 20 | Review + Practice | Node.js Review | Students build a mini server project.

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Week 5: Firebase Introduction

Day | Topic | Objective | Activity  
---|---|---|---  
Day 21 | What is Firebase? | Understand Firebase services | Explore Firebase dashboard.  
Day 22 | Setting up Firebase | Create a Firebase project | Set up project + copy config keys.  
Day 23 | Connect HTML to Firebase | Link HTML to Firebase | Add Firebase SDK to page.  
Day 24 | Save Data to Firebase | Write to Realtime Database | Form to save name/message to DB.  
Day 25 | Read Data from Firebase | Display saved messages | Read and list messages on page.

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Week 6: Final Mini Project

Day | Topic | Objective | Activity  
---|---|---|---  
Day 26 | Project Setup | Start Final Project | Plan: Build a small guestbook website.  
Day 27 | Frontend Work | HTML + CSS Pages | Build basic frontend of guestbook.  
Day 28 | Backend Work | Firebase Integration | Connect to Firebase to store messages.  
Day 29 | Testing and Debugging | Fix errors | Students debug and test project.  
Day 30 | Final Presentation | Showcase Projects | Students show their guestbooks!

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Summary  
- 30 minutes per day = 1 clear small goal.  
- Hands-on coding every session.  
- Mini-projects and practice after every major topic.  
- Final guestbook project to show off skills.