

PHP Laravel Full-Stack Web Development

A comprehensive, hands-on journey from web fundamentals to production-ready Laravel applications. This course is structured across **14 progressive modules** — covering everything from how the internet works to building a live full-stack project with real-world complexity.

FULL-STACK TRACK

14 MODULES

Module 1: Web Development Fundamentals

Before writing a single line of code, you need to understand the environment your applications live in. This module builds the mental model every developer depends on.

Client–Server Architecture

How browsers communicate with web servers — requests, responses, and the role of each party in delivering a webpage.

HTTP / HTTPS Basics

Understand request methods (GET, POST, PUT, DELETE), status codes, headers, and why HTTPS matters for secure communication.

Browsers & Dev Tools

Navigate the browser's developer tools — inspect elements, debug JavaScript, monitor network requests, and analyze page performance.

Domains, Hosting & Servers

From DNS resolution to shared vs. VPS hosting — understand how your code gets from your machine to the live internet.

Module 2: HTML5 — Frontend Structure

What You'll Build

Well-structured, semantic web pages that are both readable by browsers and crawlable by search engines — the essential skeleton of every website.

- Proper document structure with semantic tags
- Accessible, SEO-friendly markup patterns
- Interactive forms with built-in validation

Tags, Attributes & Forms

Core HTML elements, attribute syntax, and building functional input forms with labels, inputs, and submission handling.

Semantic HTML

Use `<header>`, `<main>`, `<section>`, `<article>`, and `<footer>` to give structure meaningful context.

Tables, Lists & Media

Display tabular data properly, create ordered and unordered lists, and embed images, audio, and video elements.

SEO-Friendly Structure

Meta tags, heading hierarchy, alt attributes, and markup practices that improve search engine visibility from day one.

Module 3: CSS3 — Design & Layout

CSS transforms raw HTML into polished, responsive interfaces. This module covers both foundational concepts and modern layout techniques used in professional projects today.



Selectors & Box Model

Master specificity, inheritance, margin, padding, border, and the fundamental model that controls how every element is sized and spaced.



Flexbox & Grid

Build complex, two-dimensional layouts with CSS Grid and elegant one-dimensional alignment with Flexbox — the backbone of modern UI design.



Responsive Design

Apply a mobile-first approach using media queries, fluid units, and breakpoints to ensure your sites look great on any screen size.



Animations & Transitions

Add polish and interactivity with CSS transitions, keyframe animations, and transform properties that bring your UI to life.

Module 4: JavaScript — Core Programming

JavaScript is the engine of the modern web. This module gives you a thorough grounding in the language itself — from basic syntax to dynamic DOM control and ES6 features used in every professional codebase.

1

Variables, Types & Operators

Declare variables with `let`, `const`, and `var`. Work with strings, numbers, booleans, arrays, and objects.

2

Functions, Loops & Conditions

Write reusable logic with functions, iterate with `for`/`while` loops, and control flow with `if/else` and `switch`.

3

DOM Manipulation

Select and modify HTML elements dynamically — change content, styles, and attributes in real time using JavaScript.

4

Events & Form Validation

Listen for user interactions with event listeners. Validate form inputs client-side before they ever reach the server.

5

ES6+ Concepts

Arrow functions, template literals, destructuring, spread/rest operators, promises, and modules — modern JavaScript essentials.

Module 5: Bootstrap — UI Framework

Bootstrap dramatically accelerates frontend development by providing a robust library of pre-built, responsive UI components. Rather than writing CSS from scratch, you leverage tested patterns trusted by millions of developers worldwide.

12-Column Grid System

Build fluid, responsive layouts that automatically adapt to any screen width using Bootstrap's powerful grid utility classes.

Ready-Made Components

Navbars, cards, modals, dropdowns, alerts, badges, and more — production-ready components you can customize and deploy immediately.

Real-World UI Building

Assemble a complete, responsive web interface from scratch using Bootstrap utilities, combining components into professional layouts.

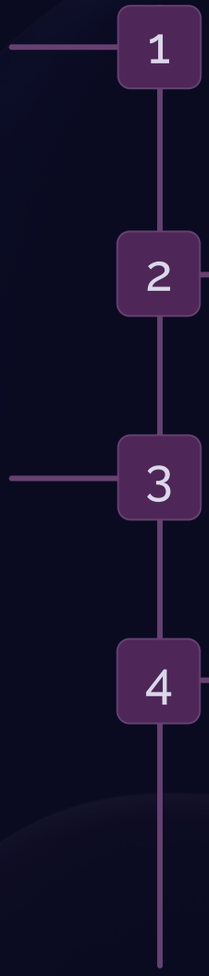
Why Bootstrap?

Bootstrap removes the guesswork from responsive design. You write less custom CSS, ship faster, and maintain consistent cross-browser styling — making it an industry standard for rapid UI development.

- Industry-standard framework
- Huge ecosystem & community
- Built-in accessibility support
- Customizable via Sass variables

Module 6: Git & GitHub — Version Control

Every professional developer uses version control. Git lets you track every change to your code, roll back mistakes, and collaborate with a team without overwriting each other's work. GitHub brings that collaboration online.



1

Git Basics

Initialize repos, stage changes, write meaningful commit messages, and push your work — the daily workflow of every developer.

2

Branching & Merging

Create feature branches to isolate work, resolve merge conflicts confidently, and use strategies like Git Flow for structured development.

3

GitHub Repositories

Manage remote repositories, handle pull requests, review code, and maintain a professional developer portfolio on GitHub.

4

Collaboration Workflow

Simulate real team environments — forking, cloning, opening issues, and participating in code reviews just like a professional engineering team.

Module 7: PHP Fundamentals

PHP powers over 75% of server-side websites. This module gives you a solid, practical foundation in PHP — the language that underpins Laravel and remains one of the most widely deployed backend technologies on the web.

Syntax & Variables

PHP tags, variable types, string manipulation, constants, and operators — the building blocks of every PHP script.

Control Structures

Conditional logic with `if/else`, `switch`, and looping with `for`, `foreach`, `while`, and `do-while`.

Functions & Arrays

Write reusable functions, work with indexed and associative arrays, and leverage PHP's rich built-in function library.

Forms & GET/POST

Handle form submissions server-side, process and sanitize user input, and understand the difference between GET and POST request methods.

Sessions & Cookies

Persist user data across pages with PHP sessions and cookies — essential for login systems and personalized user experiences.

Module 8: Advanced PHP

Object-Oriented PHP

OOP is the cornerstone of Laravel. In this module, you'll master PHP classes, objects, constructors, access modifiers, inheritance, interfaces, and abstract classes — the exact concepts Laravel is built upon.

- Classes, objects & constructors
- Inheritance & method overriding
- Interfaces & abstract classes
- Encapsulation & polymorphism

File Handling

Read, write, append, and delete files on the server. Handle file uploads from forms safely and efficiently.

Error Handling

Use `try/catch` blocks, custom exception classes, and error logging to build robust, fault-tolerant applications.

Security Fundamentals

Understand and defend against **XSS** (Cross-Site Scripting) and **CSRF** (Cross-Site Request Forgery) — the most common web vulnerabilities.

Module 9: MySQL Database

Databases are where your application's data lives. This module takes you from schema design to writing complex queries — and critically, shows you how to connect and query MySQL directly from PHP.

01

Database Design Basics

Normalize your schema, define relationships (one-to-many, many-to-many), choose appropriate data types, and design tables that scale cleanly.

02

CRUD Operations

Write `SELECT`, `INSERT`, `UPDATE`, and `DELETE` queries confidently. Master filtering with `WHERE`, sorting with `ORDER BY`, and grouping with `GROUP BY`.

03

Joins & Indexing

Combine data across tables with `INNER JOIN`, `LEFT JOIN`, and `RIGHT JOIN`. Speed up queries with proper indexing strategies.

04

PHP + MySQL: PDO & MySQLi

Connect PHP to MySQL using both PDO and MySQLi. Use prepared statements to prevent SQL injection and manage database errors gracefully.

☆ CORE FRAMEWORK

Module 10: Laravel Framework — Core

Welcome to Laravel — the elegant PHP framework designed for developers who value clean code and rapid development. This module lays the groundwork for everything that follows.



MVC Architecture

Understand how Laravel separates concerns into Models, Views, and Controllers — the pattern that keeps large applications organized and maintainable.



Installation & Setup

Install Laravel via Composer, configure your `.env` file, set up a local development environment, and take your first app live in minutes.



Folder Structure

Navigate Laravel's directory layout confidently — understanding where routes, controllers, models, views, and config files live and why.



Routing, Controllers & Blade

Define clean URL routes, build resource controllers, and render dynamic views using Blade — Laravel's powerful, expressive templating engine.

Module 11: Laravel Advanced Concepts

This module takes your Laravel skills to a professional level — covering the features that separate junior developers from developers who build secure, scalable, real-world applications.

Middleware

Intercept and filter HTTP requests before they reach your controllers. Use middleware for authentication guards, logging, rate limiting, and custom request processing.

Form Validation

Validate incoming requests with Laravel's powerful validation rules. Return contextual error messages and keep controllers clean using Form Request classes.

Authentication

Scaffold a complete Login/Register system with Laravel Breeze or Auth. Manage password hashing, remember-me tokens, and email verification out of the box.

Authorization: Roles & Permissions

Control what different users can do using Gates and Policies. Implement role-based access control (RBAC) to manage admin, editor, and user privileges.

Eloquent ORM

Interact with your database using expressive, fluent PHP rather than raw SQL. Define model relationships — `hasOne`, `hasMany`, `belongsToMany` — with minimal code.

Module 12: API Development

Why APIs Matter

Modern applications rarely live in isolation. APIs allow your Laravel backend to serve data to mobile apps, single-page applications, third-party services, and IoT devices — making your skills universally applicable in the job market.

- Decouple frontend from backend
- Power mobile apps with the same backend
- Enable third-party integrations
- Industry-standard architecture pattern

01

RESTful API Concepts

Understand REST principles — stateless communication, resource-based URLs, and correct use of HTTP verbs and status codes.

02

Building APIs in Laravel

Create API routes, return JSON responses, use API resources for data transformation, and handle API versioning cleanly.

03

API Authentication

Secure your endpoints using **Laravel Sanctum** for SPA/token auth or **JWT** for stateless token-based authentication across distributed systems.

04

API Testing with Postman

Use Postman to send requests, inspect responses, test authentication flows, and document your API endpoints professionally.

Module 13: Frontend Integration

A full-stack developer bridges the gap between server and browser. This module teaches you how to make your Laravel backend talk to your frontend dynamically — without full page reloads — creating fluid, modern user experiences.



AJAX & Fetch API

Use JavaScript's `fetch()` and AJAX techniques to send asynchronous HTTP requests to your Laravel routes and handle JSON responses in real time.

Frontend–Backend Integration

Wire up your Laravel API endpoints to frontend interfaces — passing authenticated requests, handling CORS, and managing state between server and client.

Dynamic Data Rendering

Render live data from your database into the browser without page reloads — building interactive tables, live search, and real-time content updates.

Pro Tip: These skills form the foundation for working with modern JavaScript frameworks like Vue.js or React alongside Laravel — a combination that's highly sought after by employers.

Module 14: Live Project Development

Everything you've learned comes together here. You'll build a complete, production-quality full-stack application from scratch — following a real-world development workflow from planning to deployment.



Admin Panel with Full CRUD

Build a complete admin dashboard with Create, Read, Update, and Delete functionality — protected routes, paginated data tables, and a clean management interface.



Choose Your Project

Apply your skills to a real use case: a **Student Management System**, a fully-featured **E-Commerce Platform**, or a **Learning Management System (LMS)** — each covering distinct real-world patterns.



Payment Gateway (Optional)

Integrate a real payment provider such as Stripe to handle transactions, process webhook events, and manage subscription or one-time payment flows.



Real-World Workflow

Work through the full development lifecycle — planning features, writing migrations, building APIs, integrating the frontend, testing, and pushing to a live server using Git.