

Full-Stack Development Training and Internship Syllabus

15 Days - Basics of Full-Stack Development

- **Introduction to Web Development**
 - Frontend, Backend, and Full-Stack Overview
 - Tools and Technologies (VS Code, Git, Browsers)
- **HTML & CSS Basics**
 - Structure of Web Pages
 - Styling with CSS (Selectors, Box Model)
- **JavaScript Basics**
 - Variables, Functions, and Loops
 - DOM Manipulation
- **Introduction to Git and GitHub**
 - Version Control Basics
 - Repository Setup and Collaboration

30 Days - Frontend Development Foundations

- **Includes 15-Day Modules**
- **Advanced HTML & CSS**
 - Responsive Web Design (Media Queries)
 - CSS Frameworks (Bootstrap)
- **JavaScript Intermediate**
 - ES6 Features (Arrow Functions, Classes)
 - Event Handling and Debugging
- **Introduction to Frontend Frameworks**
 - Basics of React.js
 - Component Creation and Props
- **Project**
 - Static Website Development

45 Days - Backend Development Basics

- **Includes 30-Day Modules**
- **Introduction to Backend Development**
 - Role of Backend in Web Applications
 - Overview of Server-Side Languages (Node.js Introduction)
- **Node.js and Express.js**
 - Setting Up a Server
 - Routes and Middleware

- **Database Basics**
 - SQL vs. NoSQL Databases
 - Introduction to MongoDB
- **Project**
 - Simple CRUD Application

60 Days - Intermediate Full-Stack Development

- **Includes 45-Day Modules**
- **Advanced React.js**
 - State Management with Context API
 - Hooks (useState, useEffect)
- **RESTful APIs**
 - Designing and Consuming APIs
 - API Testing with Postman
- **Authentication & Authorization**
 - JWT and Session Management
 - Role-Based Access Control
- **Project**
 - MERN Stack Application (Frontend + Backend Integration)

90 Days - Advanced Full-Stack Development

- **Includes 60-Day Modules**
- **Advanced Backend Concepts**
 - Asynchronous Programming in Node.js
 - File Upload and Management
- **Database Management**
 - Advanced MongoDB (Aggregation, Indexing)
 - Introduction to SQL (MySQL/PostgreSQL Basics)
- **Version Control and Deployment**
 - Git Branching Strategies
 - Deploying Applications on Platforms (Heroku, Vercel)
- **Project**
 - Full-Stack E-commerce Application

180 Days - Master Full-Stack Development Program

- **Includes 90-Day Modules**
- **Frontend Advanced Topics**
 - State Management with Redux

- Component Libraries (Material-UI, Tailwind CSS)
- **Advanced Backend Topics**
 - Microservices Architecture
 - WebSockets for Real-Time Communication
- **DevOps Basics**
 - CI/CD Pipelines (GitHub Actions)
 - Docker for Containerization
- **Career Preparation**
 - Building a Full-Stack Portfolio
 - Freelance and Job Opportunities Guidance
- **Capstone Project**
 - End-to-End Scalable Web Application Development