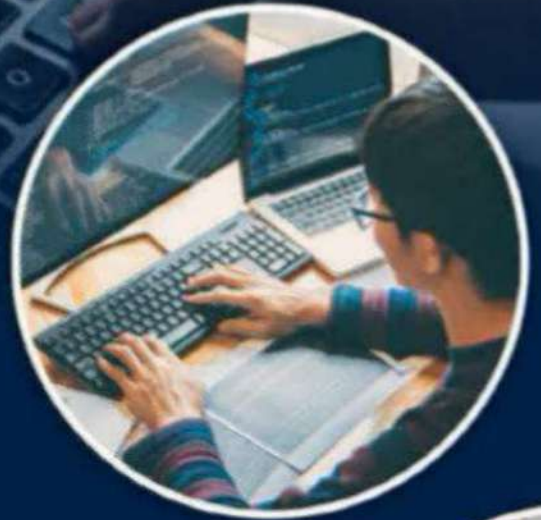




**BRILLICA**  
SERVICES

# Advance Frontend Web Development

**Duration : 6 months**



## Our Industry Associations



E&ICT Academy  
IIT Guwahati



**BRILLICA SERVICES PVT.LTD.**

**88821-40688 | 90840-63259 | 89795-44473**

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Head Office : Dehradun | Corporate Office : New Delhi

# Course Curriculum

## Module 1 : Introduction to Web Development

- Overview of Web Development
- Understanding Web Technologies
- Client-Side vs Server-Side Development
- Introduction to Web Browsers and How They Work
- Web Development Tools and IDEs

## Module 2 : HTML

- Introduction to HTML
- Text Formatting and Semantic HTML
- Links and Navigation
- Images and Media
- HTML Forms and Tables

## Module 3 : CSS

- Introduction to CSS
- Selectors and Combinators
- Box Model
- Colors and Backgrounds
- Typography
- Layout (Flexbox and Grid)

- Positioning
- Responsive Design and Media Queries
- Animations and Transitions
- Pseudo-Classes and Pseudo-Elements
- CSS Variables (Custom Properties)

## **Module 4 : Javascript**

- Introduction to JavaScript
- Data Types and Variables
- Operators and Expressions
- Control Flow
- Functions
- Objects and Arrays
- DOM Manipulation
- Events and Event Handling
- ES6+ Features
- Modules and Imports/Exports
- Closures and Scope
- Higher-Order Functions
- JavaScript Prototypes and Inheritance
- JavaScript Design Patterns
- Asynchronous JavaScript
- Error Handling and Debugging Techniques
- Event Loop and Asynchronous JavaScript Internals
- JavaScript Performance Optimization
- Web Storage (LocalStorage, SessionStorage, Cookies)

## **Module 5 : Git and Github**

- Introduction to Version Control and Git
- Basic Git Commands
- Working with .gitignore
- Branching and Merging
- Collaboration and Pull Requests

## **Module 6 : React**

- Introduction to React
- JSX and Components
- Props and State Management
- Event Handling
- Component Lifecycle and Hooks
- Conditional Rendering
- Forms and Form Handling
- Context API for State Management
- Higher-Order Components (HOCs)
- Error Boundaries
- Custom hooks
- React Performance Optimization
- Building and Deploying React Apps

## **Module 7 : Tailwind CSS**

- Core Utilities and Customization
- Advanced Features

## **Module 8 : React Libraries**

- State Management Libraries (Redux, Zustand)
- UI Component Libraries (Magic UI, shadcn/ui, Ant Design)
- Data Fetching Libraries (TanStack Query, SWR, Axios)
- Routing Library (React Router)
- Form Handling (Formik, React Hook Form)
- Animation Library (Framer Motion, React Spring)
- Utility (Lodash, date-fns)

## **Module 9 : Typescript**

- Introduction to TypeScript
- Type Annotations and Inference
- Basic Types
- Interfaces and Type Aliases
- Functions and Generics
- Classes and Object-Oriented Programming
- Type Guards and Type Narrowing
- TypeScript with React
- Modules and Namespaces
- TypeScript Configuration
- Error Handling in TypeScript
- Advanced Types (Union, Intersection)

## **Module 10 : Next.js**

- Introduction to Next.js
- Pages and Routing

- Static Site Generation (SSG) and Server-Side Rendering (SSR)
- Data Fetching Methods (getStaticProps, getServerSideProps, getStaticPaths)
- Client-Side Data Fetching
- Dynamic Routing
- Middleware and API Middleware
- Authentication in Next.js
- Error Handling in Next.js
- SEO Optimization in Next.js
- Optimization in Next.js (Images, Fonts)
- Deployment and Optimization

## **Module 11 : Testing**

- Jest
- React Testing Library
- Cypress for E2E
- Mocha
- Chai
- SuperTest

## **Module 12 : Firebase**

- Firebase Authentication
- Firestore and Realtime Database
- Firebase Storage
- Firebase Functions
- Firebase Hosting
- Firebase Cloud Messaging (FCM)

## Capstone Project

- Project Setup and Planning
- Frontend Development
- Firebase Integration
- Testing and Debugging
- Deployment and Final Presentation

# & Excellent Placement Internship Record

## Industry Recruiters

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