

Coincent 3 Year Program Curriculum **Web Development**

Partnered by



*Empowering Learners,
Accelerating Careers.*

ABOUT COINCENT

Coincent offers a 3-Year Program that is a well-structured, career-focused initiative designed to equip students with practical skills, real-world experience, and strong placement support. The program is tailored to ensure progressive learning and career readiness across three year phases.

Why It's Unique

- Only one batch per year with limited seats (150 students) per Domain to maintain quality.
- Prepares students step-by-step to become job-ready by graduation.

"Web Development – Learn by Doing"

Web development is the process of creating and maintaining websites or web applications that are accessed via the internet. It includes mainly three components

1. Front End Development
2. Back End Development
3. Full Stack Development

Key Points:

- Every modern business needs a website or web app.
- Web development powers everything from simple blogs to advanced platforms like Amazon, Facebook, and Netflix.



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3-Year Program Structure Breakdown

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Year 1 :- Industrial Training

Chapter 1: HTML Fundamentals

1. Introduction to HTML

- Purpose: HTML (HyperText Markup Language) is the backbone of all web pages. It structures content for browsers.
- Key Concepts: Markup language, HTML versions (HTML5 is the latest), static vs dynamic pages.

2. Structure of HTML

- Tags:
 - `<!DOCTYPE html>`: Declares the HTML version.
 - `<html>`: Root element of the document.
 - `<head>`: Metadata, scripts, styles.
 - `<body>`: Visible content of the web page.

3. Basic HTML Elements

- Usage of tags such as `<h1>`–`<h6>` for headings, `<p>` for paragraphs, `
` for line breaks, `` for bold, and `` for italics.

4. HTML Link Tags

- ``: Used for hyperlinks.
- `target="_blank"` opens links in a new tab.



5. Ordered and Unordered Lists

- ``: Unordered (bulleted)
- ``: Ordered (numbered)
- ``: List item within lists

6. Head and Meta Tags

- Metadata tags like `<meta charset="UTF-8">`, `<meta name="viewport" content="width=device-width, initial-scale=1.0">`
- `<title>` sets the browser tab name.

7. Styles and Semantic Tags

- Inline Styles: `style="color:blue"` (used sparingly)
- Semantic Tags: `<header>`, `<footer>`, `<article>`, `<section>`, `<aside>`, `<nav>` improve readability and SEO.

8. HTML Element Attributes

- `id`, `class`, `style`, `title`, `alt` (for images), `href`, `src`
- Provide additional info to elements for styling and scripting.

9. HTML Form Elements

- Forms collect user input using `<input>`, `<textarea>`, `<select>`, `<button>`.
- Validation with `required`, `type="email"` etc.

10. HTML Table Elements

- Table structure using `<table>`, `<tr>`, `<td>`, `<th>`.
- Attributes: `colspan`, `rowspan`, `border`, `cellpadding`.



Chapter 2: CSS Fundamentals

1. Fundamentals of CSS

- Cascading Style Sheets control layout and design.
- Types: Inline, Internal (<style>), External (.css file).

2. CSS Selectors

- Select elements by tag (p), class (.class), id (#id), attributes ([type="text"]), pseudo-classes (:hover), pseudo-elements (::after).

3. Color and Backgrounds

- color, background-color, gradients using linear-gradient(), image backgrounds using background-image.

4. Fonts

- font-family, font-size, import Google Fonts, fallback fonts.

5. Text Properties

- text-align, text-decoration, letter-spacing, line-height, text-transform.

6. CSS Float

- Used to float elements left/right; requires clearing with clear: both;.

7. CSS Box Model

- Each element has: content + padding + border + margin.
- Visual spacing is managed here.



8. CSS Display

- block, inline, inline-block, none (for hiding), flex, grid.

9. Flexbox

- One-dimensional layout system for aligning items horizontally or vertically.
- justify-content, align-items, flex-direction.

10. Responsive Web Design

- Adapting layout for devices using @media queries.
- Units: %, vh, vw, em, rem for scalability.

Chapter 3: JavaScript Fundamentals

1. Introduction

- JS enables interactivity.
- Runs on client-side. Supported by all browsers.

2. Variables and Outputs

- var, let, const: ES6 introduced let and const.
- Outputs: alert(), console.log(), document.write().

3. Data Types

- Strings, numbers, booleans, null, undefined, and symbols.

4. Conditional Statements

- if, else if, else, switch to make decisions.



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5. Loops

- for, while, do...while loops for repeating code.

6. Functions

- Reusable blocks of code.
- Parameters, return values, `function myFunc() {}`

7. Scope

- Local vs Global variables.
- Hoisting: Function and variable declarations are moved to the top.

8. Arrow Functions

- `const add = (a, b) => a + b;`
- Shorter syntax, lexical this.

9. Arrays

- Store ordered data.
- Methods: `push()`, `pop()`, `shift()`, `map()`, `filter()`.

10. Objects

Key-value pairs. `{ name: "John", age: 30 }`

- Access via dot or bracket notation

11. Event Handling

- `onclick`, `onmouseover`, `onchange`, `addEventListener`.

12. DOM & BOM

- DOM: Access and manipulate HTML structure.
- BOM: Browser-specific APIs (`window`, `navigator`).



13. JSON

- Data exchange format.
- `JSON.stringify()`, `JSON.parse()` for working with APIs.

Chapter 4: jQuery Fundamentals

1. Role of jQuery

- Simplifies DOM manipulation and event handling.

2. Getting Started

- Use via CDN or download. Requires jQuery library.

3. Basic Syntax

- `$(selector).action()` e.g., `$("#btn").click()`.

4. Selectors

- Same as CSS: `#id`, `.class`, `element`.

5. Events

- Attach behaviors: `click()`, `hover()`, `submit()`.

6. Show/Hide/Toggle

- Easy UI visibility changes: `show()`, `hide()`, `toggle()`.

7. Fading Effects

- Animate opacity using `fadeIn()`, `fadeOut()`.



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8. Sliding Effects

- Vertical transitions with `slideUp()`, `slideDown()`.

9. Animations

- Animate any CSS property. Use `stop()` to interrupt.

10. Chaining

- Combine multiple actions: `$(selector).css().slideUp().fadeOut();`

Chapter 5: Bootstrap Fundamentals

1. Bootstrap Intro

- CSS framework for responsive UI development.
- Includes grid system, prebuilt components.

2. Getting Started

- Include via CDN or install locally.

3. Containers & Typography

- `container`, `.container-fluid` for layout.
- Text utilities for alignment, size, and colors.

4. Grid System

- 12-column layout with breakpoints (`col-sm`, `col-md`, etc.)



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5. Tables & Forms

- Style tables with `.table`, form controls with `.form-control`.

6. Buttons & Images

- Predefined styles using `.btn`, responsive images via `.img-fluid`.

7. Cards

- Flexible content containers for text, images, links.

8. Components

- Navs, navbars, accordions, breadcrumbs, paginations, modal, spinners, tooltips, popovers, alerts, carousels.

Back-End Development Curriculum

Chapter 1: PHP Fundamentals

1. PHP Basics

- Open-source scripting language executed on server.

2. Syntax

- `<?php ?>` tags, semicolons, comments (`//`, `/* */`).

3. Constants and Variables

- `define("SITE", "MySite");`
- Dynamic typing: `$x = "hello";`



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4. Echo/Print

- Output data to browser.

5. Data Types

- Strings, numbers, arrays, objects, null.

6. String Functions

- strlen(), strpos(), str_replace() etc.

7. Operators and Conditions

- Arithmetic, comparison, logical.
- if, switch, while, for.

8. Arrays & Objects

- Loop through arrays, create class instances.

9. Functions

- User-defined functions with parameters and return values.

10. Forms & Validation

- Validate user input from \$_POST or \$_GET.

11. Sessions & Cookies

- Manage user state across pages.

12. File Handling & Emails

- Read/write files. Send email via mail() or SMTP.

13. JSON, Filters

- Data formatting and input sanitation using filter_var().

14. MySQL Integration

- CRUD operations using mysqli or PDO.



Chapter 2: SQL Fundamentals

- SQL operations to manage relational databases.
- From creating tables to writing complex queries:

Chapter 3: Laravel Fundamentals

1. Laravel Basics

- MVC framework for PHP. Uses Eloquent ORM.
- Install via Composer.

2. Artisan CLI

- Commands for generating code: `php artisan make:controller`, `migrate`, `serve`.

3. Routing, Middleware

- Define URL routes and control access via middleware.

4. Controllers, Views (Blade)

- Business logic in controllers, UI in Blade templates.

5. Models, Migration

- Define schema with migrations and interact using models

6. API and Web Routes

- Create REST APIs with `routes/api.php`.

7. Validation, Sessions

- Validate requests using `FormRequest` or controller methods.
- Handle user data across sessions.



8. Mail, Queue, Helpers

- Use Mailtrap for testing emails.
- Queue background jobs.
- Helpers like `url()`, `asset()`.

Year 2 :- Application & Project Phase:

– Year 2 is full of hands-on-experience on 6 live projects –

1. Advance E-Commerce Website

An advanced e-commerce website offers a seamless online shopping experience with features like user authentication, dynamic product listings, cart management, and secure payment gateway integration. It supports multiple product categories, real-time search and filtering, product reviews, and order tracking. Admins can manage inventory, process orders, and offer promotions via an intuitive backend. The frontend is designed to be responsive and visually engaging using HTML, CSS, Bootstrap, and JavaScript frameworks. Backend logic is handled using PHP or Laravel with SQL database integration. It also includes features like wishlist, coupon codes, and email notifications. SEO optimization and performance tuning are part of the deployment process. This project gives full-stack exposure to modern e-commerce systems.



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2. Job Portal Dashboard

This dashboard allows users to search and apply for jobs while companies can post and manage job listings. It includes role-based access for job seekers, recruiters, and admins. Features include user registration/login, profile management, resume upload, and job alerts. Recruiters can filter applications, schedule interviews, and manage shortlists. Admins have full control over users, job posts, and analytics. The frontend is built with responsive UI libraries like Bootstrap and React or jQuery, while the backend uses PHP/Laravel or Node.js with a MySQL or MongoDB database. The system also supports application tracking, status updates, and real-time notifications. It's an excellent project for learning CRUD operations, authentication, and dashboard design.

3. Doctor Appointment Dashboard

This healthcare-oriented dashboard enables patients to book appointments, consult doctors, and maintain medical history online. It provides separate portals for doctors and patients with features like appointment scheduling, real-time calendar integration, and prescription uploads. Doctors can manage their availability, view patient records, and send consultation notes. Patients can search for doctors by specialty or location and receive automated SMS/email confirmations. Admins can manage doctor profiles, bookings, and system reports. Built using frontend tools like Bootstrap and JavaScript, with a backend



powered by PHP or Node.js and a relational database. The system ensures data security and smooth UX, ideal for digitizing clinical workflows.

4. Chat Application

This real-time chat application supports one-to-one and group messaging with features like typing indicators, message timestamps, and online status tracking. It allows user sign-up/login with JWT authentication and secure password hashing. Messages are sent and received using WebSockets (e.g., Socket.io) for real-time performance. The UI is built with HTML, CSS, and React or plain JavaScript, while the backend uses Node.js and Express, with MongoDB or Firebase for storage. Optional features include emojis, file sharing, chat history, and notifications. It's a strong full-stack project demonstrating WebSocket communication, state management, and responsive design. The system can be deployed on platforms like Heroku or Vercel.



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Testimonials of Web Development Program Completed Students

AMIT KUKREJA

🎉 Exciting News! 🎉

I'm thrilled to announce the completion of my 3-Year Program at Coincent.ai as a Frontend Developer.

Throughout this journey, I had the opportunity to dive deep into web development, honing my skills in **HTML, CSS, and JavaScript**, while also exploring advanced concepts that enhanced my understanding and expertise in the field.



AISHWARYA N

Excited to share that I've completed the Industrial Training phase of the Coincent 3-Year Program!

Grateful for the opportunity to enhance my skills in **Web Development** with real-world experience



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Year 3 – Placement & Internship Phase:

1. Guaranteed Internship Phase

- In Year 3, Coincent guarantees an internship with partner companies. The internship includes a formal Internship Offer Letter and a Completion Certificate upon successful completion.
- This is part of 3 year Program “Industrial Training + Internship” model – It covers live classes, mentorship, and project work, but the internship phase itself is completely complimentary

2. Structured Placement Preparation

- Coincent supports students in portfolio-building with multiple completed projects (typically around 8) and Microsoft-aligned certifications .
- Coincent provides mock interviews, resume reviews, and training for HR and technical rounds – all aimed at preparing you for real-world hiring.

3. Final Take

- Coincent’s 3rd year transforms theory into practical experience through a guaranteed internship, builds a robust credentials portfolio, and equips you with placement-ready skills via mock interviews and resume prep. If you’re in your 4th year, this phase sets you on a clear trajectory from "training" to "hired."



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Top Tech Roles in Web Development

The top Web Development Job Roles that are trending and have high potential for growth:

1. Front-End Developer

- Focus: User experience (UX)
- Technologies: HTML, CSS, JavaScript, React, Angular, Vue.js
- Output: Builds the visual components of a website or web app

2. Back-End Developer

- Focus: Server-side logic, databases, APIs
- Technologies: Node.js, PHP, Python (Django/Flask), Ruby, Java, MySQL, MongoDB
- Output: Handles data, authentication, server logic, and performance

3. Full Stack Developer

- Focus: Both front-end and back-end
- Technologies: MERN (MongoDB, Express, React, Node), LAMP, MEAN stack
- Output: End-to-end development of web applications

4. Web Designer / UI Designer

- Focus: Visual design, layout, typography, color schemes
- Tools: Figma, Adobe XD, Sketch, Canva
- Output: Designs mockups, wireframes, and user interfaces



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5. DevOps Engineer (for Web Deployment)

- Focus: Infrastructure, CI/CD, deployment pipelines
- Tools: Docker, Jenkins, GitHub Actions, AWS, Azure
- Output: Ensures stable, scalable, and continuous deployment of web apps

6. Web Architect / Solutions Architect

- Focus: Planning scalable and secure web systems
- Skills: High-level system design, database planning, load balancing
- Output: Architecture for enterprise-grade web applications

Rise of Web Development in India

Web development in India has experienced exponential growth over the past decade. As digital transformation sweeps across industries, the demand for skilled web developers continues to soar. Several key factors are fueling this rapid rise:

1. Digital India Initiative:

The government's push for digitization has encouraged businesses and public services to go online, increasing the need for web-based platforms.



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2. Startup Ecosystem Boom:

India's growing startup culture, especially in cities like Bengaluru, Hyderabad, and Pune, has created a surge in demand for full-stack and front-end developers.

3. Affordable Internet & Mobile Penetration:

With millions of new internet users every year, businesses are prioritizing mobile-first and responsive websites to reach wider audiences.

4. Freelancing & Global Work Opportunities:

Remote work and freelancing platforms have opened global markets to Indian web developers, making the career highly lucrative and accessible.

5. Widespread Tech Education:

Increased access to online coding bootcamps, certifications, and affordable courses (e.g., HTML, CSS, JavaScript, React, etc.) has made web development a popular career path.

6. Adoption of Modern Frameworks:

The use of technologies like React, Angular, Laravel, and Node.js has enhanced productivity, performance, and job market value for developers.



7. E-Commerce & Digital Services Expansion:

Online shopping, ed-tech, health-tech, and fintech platforms rely heavily on robust web development — a trend that keeps growing in India.



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