



TECH NEXTGEN ACADEMY

HTML & CSS WEB DEVELOPMENT

Structure. Style. Design. Build. Grow.

Foundation to Professional Level | Practical Classroom Training | Project-Based Learning | Duration: 2 - 3 Months

BUILD A STRONG FOUNDATION IN WEB DEVELOPMENT

HTML and CSS are the foundation of every modern website. **HTML (HyperText Markup Language)** provides the structure and meaning of web pages, while **CSS (Cascading Style Sheets)** controls their visual presentation, layout, responsiveness, and overall user experience.

At **Tech NextGen Academy**, HTML & CSS Web Development is designed to take you from a complete beginner to a **confident website designer and front-end development beginner** through structured concepts, hands-on coding, responsive layouts, real-world website projects, and practical design challenges. You will learn how to create websites from scratch instead of simply using templates.

Structure → Styling → Layout → Responsive Design → User Experience → Real-World Websites

***Our Goal:** From Web Development Beginner → Confident HTML & CSS Developer → Strong Foundation for Front-End Development.*

WHO IS THIS COURSE FOR & PREREQUISITES

TARGET AUDIENCE

- School & College Students
- BCA / B.Sc. / B.Tech Students
- Computer Science & Engineering Students
- Commerce & Non-IT Students
- Job Seekers & Freshers
- Aspiring Web Designers & Front-End Developers
- Beginners in Web Development & IT Switchers
- Aspiring Freelancers & Small Business Owners
- Students Preparing for Web Development Interviews
- Anyone who wants to learn website development from scratch

PREREQUISITES

- Basic computer knowledge is recommended.
- No previous HTML or CSS experience required.
- No programming background required.
- No advanced mathematics required.
- A willingness to practice, design, and build websites is essential.

01 — Web Development Fundamentals

UNDERSTAND HOW THE WEB WORKS

- What is a website & web page?
- How websites work | Internet vs WWW
- Client & server concepts
- Browser & web server fundamentals
- Domain names, Hosting, & URLs
- HTTP & HTTPS introduction | Request & response cycle
- Front-end vs back-end | Static vs dynamic websites
- Role of HTML, CSS & JavaScript
- Introduction to responsive web design

WORKFLOW & PRACTICAL

Idea → Structure → Design → Code → Test → Improve → Publish

Analyze popular websites and identify content, structure, layout, styling, navigation, and responsive behaviour.

02 — HTML Document Structure & Syntax

BUILD THE STRUCTURE OF A WEB PAGE

- What is HTML? Evolution & HTML5 overview
- HTML syntax, elements, tags (opening & closing)
- Attributes, nested, parent & child elements
- HTML comments, whitespace, case sensitivity
- Proper indentation & document structure

CORE DOCUMENT ELEMENTS

- `<!DOCTYPE html>`, `<html>`, `<head>`
- `<body>`, `<title>`, `<meta>`, `<link>`

PRACTICAL

Create your first properly structured HTML web page with head section, body content, and browser output.

03 — Text, Headings & Content Elements

CREATE WELL-STRUCTURED WEB CONTENT

- Headings (`<h1>` to `<h6>`), hierarchy & SEO best practices
- Text elements: `<p>`, `<br>`, `<hr>`, `<strong>`, `<em>`
- Formatting: `<b>`, `<i>`, `<u>`, `<mark>`, `<small>`, `<sub>`, `<sup>`, `<del>`, `<ins>`
- Text emphasis, semantic meaning & readable page hierarchy

PRACTICAL PROJECTS

Create personal profile page, course info page, academy intro page, and article page.

04 — Links & Website Navigation

CONNECT YOUR WEB PAGES

- Anchor element & `href` attribute
- Absolute vs Relative URLs
- Internal, external, email, telephone & page-section links
- `target` attribute & link behavior
- Navigation menus & linking multiple HTML pages

PRACTICAL PROJECT

Build a multi-page navigation structure:

Home → About → Courses → Projects → Contact

05 — Images, Audio & Video

ADD MULTIMEDIA TO WEB PAGES

- **Images:** `<img>`, `src`, `alt`, dimensions, relative/absolute paths, optimization & accessibility
- **Audio & Video:** `<audio>`, `<video>`, controls, poster images, media sources
- **iFrames:** `<iframe>`, embedding external content, maps, and videos

PRACTICAL PROJECT

Create a multimedia webpage featuring Images + Video + Audio + Embedded maps/content.

06 — Lists & Information Structure

ORGANIZE INFORMATION EFFECTIVELY

- **Unordered Lists** (`<ul>`, `<li>`): Nesting & bullet styles
- **Ordered Lists** (`<ol>`, `<li>`): Numbering, start values, reversed lists
- **Description Lists** (`<dl>`, `<dt>`, `<dd>`): Key-value structuring

PRACTICAL PROJECT

Build course lists, feature lists, menu structures, step-by-step guides, service lists & FAQ sections.

07 — Tables & Structured Data

DISPLAY INFORMATION IN TABULAR FORMAT

- `<table>`, `<tr>`, `<th>`, `<td>`
- Table sections: `<thead>`, `<tbody>`, `<tfoot>`
- Merging cells: `colspan` & `rowspan`
- Table captions, accessibility & basic CSS styling

PRACTICAL PROJECT

Build student marks table, course fee table, employee salary table, product pricing table & class schedule.

08 — HTML Forms & User Input

CREATE INTERACTIVE DATA-ENTRY FORMS

- Form elements: `<form>`, `<input>`, `<label>`, `<textarea>`, `<select>`, `<optgroup>`, `<legend>`
- Input types: text, password, email, number, tel, date, time, checkbox, radio, file, range
- Attributes: `action`, `method`, `placeholder`, `required`, `pattern`, `min/max`

PRACTICAL PROJECT

Build student registration, enquiry, contact, job application, and login forms.

09 — Semantic HTML & Accessible Structure

WRITE MEANINGFUL & PROFESSIONAL HTML

- Semantic tags: `<header>`, `<nav>`, `<main>`, `<section>`, `<article>`, `<aside>`, `<footer>`, `<figure>`, `<details>`
- Page organization: **Header** → **Nav** → **Main** → **Sections** → **Sidebar** → **Footer**
- Accessibility (a11y): Alt text, form labels, heading hierarchy, keyboard navigation & ARIA intro

PRACTICAL PROJECT

Convert a non-semantic div-soup webpage into an accessible, semantically structured layout.

10 — HTML5 & Modern Structure

MODERN HTML

- HTML5 overview: viewport, meta tags
- Linking CSS & JavaScript properly
- Global & custom attributes: `class`, `title`, `lang`
- Clean indentation, markup & validation

PRACTICAL PROJECT

Build a modern webpage incorporating modern HTML5 practices.

11 — CSS Fundamentals & Styling

TRANSFORM HTML INTO WEB DESIGN

- What is CSS? Syntax, rules, selectors, properties & values
- Inline, Internal, and External CSS stylesheets
- The CSS Cascade, Specificity basics, Inheritance & Source order

PRACTICAL PROJECT

Transform a plain HTML page into a professionally styled webpage using CSS.

12 — CSS Selectors & Specificity

TARGET HTML ELEMENTS WITH PRECISION

- Basic: Universal, Element, Class, ID selectors
- Attribute selectors & Combinators (descendant, child, sibling)
- Pseudo-classes: `:hover`, `:focus`, `:nth-child()`, `:not()`
- Pseudo-elements: `::before`, `::after`, `::selection`
- Specificity hierarchy: **Element** → **Class** → **ID** → **Inline** → **!important**

PRACTICAL PROJECT

Build an interactive navigation menu and custom card collection using advanced selectors.

13 — Colors, Backgrounds & Visual Design

CREATE ATTRACTIVE WEB INTERFACES

- Color formats: Named, HEX, RGB, RGBA, HSL, HSLA & transparency
- Backgrounds: color, image, position, size, repeat, attachment & multiple backgrounds
- Gradients: Linear & radial gradient combinations

PRACTICAL PROJECT

Design a Hero section, promotional banner, course cards, landing section, and CTA banners.

14 — CSS Typography & Text Design

PROFESSIONAL TYPOGRAPHY & HIERARCHY

- Font properties: family, size, weight, style, stacks
- Text formatting: align, decoration, transform, spacing, line-height, text-shadow
- Web fonts & Google Fonts integration

PRACTICAL PROJECT

Design a professional Landing Page featuring typed hero heading, subtitle, CTA button & content sections.

15 — CSS Box Model & Element Sizing

MASTER BOX MODEL & SIZING RULES

- Box Model Core: **Content** → **Padding** → **Border** → **Margin**
- Width & Height: `min/max-width`, `min/max-height`
- Padding, Margin, Border, Border-radius
- Box Sizing: `content-box` vs `border-box`

PRACTICAL PROJECT

Build profile cards, course cards, pricing cards, content containers, and registration panels.

16 — CSS Display, Positioning & Overflow

CONTROL ELEMENT BEHAVIOR & LAYOUT

- Display: `block`, `inline`, `inline-block`, `none`
- Visibility & Opacity
- Positioning: `static`, `relative`, `absolute`, `fixed`, `sticky`
- Top, right, bottom, left & `z-index` layering
- Overflow: `visible`, `hidden`, `scroll`, `auto`

PRACTICAL PROJECT

Create sticky nav, floating action buttons, overlay cards, notification badges & positioned media sections.

17 — Flexbox Layout

1D MODERN LAYOUT SYSTEM

- Flex Container: `display: flex`, `flex-direction`, `flex-wrap`, `justify-content`, `align-items`, `gap`
- Flex Items: `flex-grow`, `flex-shrink`, `flex-basis`, `order`, `align-self`

PRACTICAL PROJECT

Build navigation bar, course card grid, pricing layout, team section, and responsive footer layout.

18 — CSS Grid Layout

2D PROFESSIONAL LAYOUT SYSTEM

- Grid Container & Items: rows, columns, tracks, lines, cells, areas
- Properties: `grid-template-columns/rows/areas`, `gap`, `grid-column/row`
- Advanced functions: `repeat()`, `minmax()`, `auto-fit`, `auto-fill`

PRACTICAL PROJECT

Build website dashboard layout, image gallery, product grid, portfolio section & multi-column landing page.

19 — Responsive Web Design

BUILD WEBSITES FOR EVERY SCREEN SIZE

- Desktop → Laptop → Tablet → Mobile adaptation
- Mobile-first approach, fluid layouts, flexible images
- Relative units: `px`, `%`, `em`, `rem`, `vw`, `vh`, `vmin`, `vmax`
- Media Queries: `@media`, breakpoints, orientation

PRACTICAL PROJECT

Convert a desktop-only website into a fully responsive multi-device website.

20 — Advanced CSS Design & Effects

ADD PROFESSIONAL POLISH & MOTION

- Borders & Shadows: Box shadows, multiple shadows
- Transforms: `translate`, `scale`, `rotate`, `skew`
- Transitions & Keyframe Animations (`@keyframes`)
- CSS Variables (Custom Properties), `calc()`, `clamp()`, `min()`, `max()`

PRACTICAL PROJECT

Create animated buttons, hover cards, image hover effects, loading spinner & interactive UI components.

21 — Professional UI Component Design

DESIGN REUSABLE COMPONENT LIBRARIES

- Navbars, Hero sections, Buttons, Cards, Testimonials
- FAQ accordions, Contact sections, Modals, Badges, Alerts, Breadcrumbs, Pagination, Footers
- Design principles: Visual hierarchy, alignment, whitespace, contrast, reusability

PRACTICAL PROJECT

Create a complete reusable **Web Design Component Library** in HTML & CSS.

22 — Web Design Problem-Solving & Challenges

TURN KNOWLEDGE INTO PRACTICAL SKILL

- Solve progressive design problems: Beginner → Intermediate → Advanced
- Structured workflow: Understand → Plan → Structure → Style → Test → Responsive → Improve

FOCUS AREAS

Deep focus on specificity conflicts, layout debugging, box-model issues, and cross-browser testing.



REAL-WORLD DEVELOPMENT & CAPSTONE PROJECT

23 — Real-World HTML & CSS Website Development

Comprehensive 12-Step Real-World Workflow:

Requirement Analysis → **Content Planning** → **Page Structure** → **Visual Design** → **Layout** → **Responsive Design** → **Interaction & Effects** → **Accessibility Review** → **Testing** → **Debugging** → **Optimization** → **Presentation**

Capstone Project: Complete Responsive Business Website

Students will design and develop a complete professional, multi-page responsive website from scratch using HTML5 and CSS3.

PROJECT OPTIONS (SELECT ONE)

- Training Academy Website
- Business / Corporate Website
- Personal Portfolio Website
- Restaurant Website
- E-commerce Product Showcase
- Travel & Tourism Website
- Real Estate / Healthcare / Educational Website

FINAL DELIVERABLES

- Complete HTML & CSS Source Code
- Multi-Page Responsive Website
- Project Documentation & UI Structure
- Desktop / Tablet / Mobile Layout
- Testing Checklist & Debugging Record
- Final Viva & Presentation



TECH NEXTGEN LEARNING METHOD & JOURNEY

LEARN → **STRUCTURE** → **STYLE** → **DESIGN** → **TEST** → **RESPONSIVE** → **BUILD** → **PRESENT** → **GROW**

LEARNING ROADMAP OVERVIEW

Foundation (Web Fundamentals) → **Structure** (HTML Syntax) → **Content** (Text/Links) → **Media** (Images/Video) → **Data** (Tables) → **Interaction** (Forms) → **Semantic Web** (Accessibility) → **Modern HTML5** → **Styling** (CSS Fundamentals) → **Precision** (Selectors) → **Visual Design** (Colors/Gradients) → **Typography** → **Box Model** → **Layout** (Display/Positioning) → **Flexbox** → **CSS Grid** → **Responsive Design** → **Visual Effects** (Animations) → **Component Design** → **Problem Solving** → **Real-World Capstone** → **Certification**.



WHAT YOU WILL BE ABLE TO DO

✓ Create HTML5 documents & multi-page websites from scratch

✓ Build structured headings, content, lists & tables

✓ Build interactive forms with modern HTML5 validation

✓ Implement semantic HTML5 & accessibility standards

✓ Style websites using CSS, Google Fonts, colors & gradients

✓ Master CSS Box Model, Margins, Padding & Borders

✓ Control positioning, display modes & overflow

✓ Build professional layouts using Flexbox & CSS Grid

✓ Build responsive layouts for Desktop, Tablet & Mobile

✓ Create transitions, transforms & keyframe animations

✓ Build reusable UI Component Libraries

✓ Debug HTML/CSS & build strong base for JS/React

ASSESSMENT & CERTIFICATION

EVALUATION CRITERIA

Progress is evaluated through continuous HTML/CSS assignments, component design projects, media query tasks, debugging exercises, practical tests, capstone website, and viva presentation.

 **Certificate Issued: Tech NextGen Academy HTML & CSS Web Development Course Completion Certificate**

GRADING SYSTEM

Score Range	Grade
90 – 100%	A+
80 – 89%	A
70 – 79%	B+
60 – 69%	B
Below 60%	Needs Improvement

WHY TECH NEXTGEN ACADEMY & NEXT STEPS

WHY CHOOSE US?

- Hands-On Web Development from Scratch
- Design-Focused & Component-Based Learning
- Flexbox & CSS Grid Mastery
- Semantic & Accessible HTML Practices
- Responsive Web Design for all screen sizes
- Testing, Debugging & Portfolio Projects
- Viva & Presentation Confidence Building

FUTURE LEARNING PATHS

Front-End Development Path:

JavaScript → DOM & APIs → ES6+ → Git/GitHub → Tailwind CSS / Bootstrap → React.js → TypeScript → Next.js

Backend Development Path:

SQL & Databases → Java / Python → Spring Boot / Django / FastAPI → REST APIs → Full Stack

JOIN TECH NEXTGEN ACADEMY — ADMISSIONS OPEN

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 **Duration:** 2 - 3 Months (Limited Seats)

START DESIGNING. MASTER HTML & CSS. BUILD THE WEB.