DEPARTMENT OF COMPUTER SCIENCE

LORETO COLLEGE

SYLLABUS – COMPUTER COMPETENCY COURSE: HTML WITH CSS

Academic Year: 2025–2026

Semester: V

Course Type: Computer Competency Course

Duration: 15 Hours (15 Classes × 1 Hour)

Course Description:

This course introduces students to the fundamentals of web page creation using HTML and CSS. Students will learn to structure web pages using HTML elements and enhance their appearance using CSS styling and layout techniques. The course follows a hands-on, competency-based approach, where students progressively develop webpages by observing reference webpage designs, identifying their components, and reproducing them using appropriate HTML and CSS code. Emphasis is placed on practical application, creativity, visual presentation, and basic responsive web design.

Unit I: HTML Fundamentals and Web Page Structure

- Introduction to HTML and its role in web development
- HTML editors and web browsers
- Structure of an HTML document
- `<!DOCTYPE html>`, `<html>`, `<head>`, `<title>`, `<body>`
- Body attributes
- Paragraphs and line breaks: `<p>`, `<br>`
- Horizontal rule: `<hr>`
- Font and basic text styling: `<font>`, `<b>`, `<i>`, `<u>`, `<strong>`, `<em>`, `<strike>`
- HTML comments
- Heading tags: `<h1>` to `<h6>`
- Ordered and unordered lists: `<ol>`, `<ul>`, `<li>`
- Images: `<img>` and image attributes
- Text enhancement: `<sup>`, `<sub>`, `<center>`, `<marquee>`
- Hyperlinks: `<a>`

Unit II: HTML Components and CSS Fundamentals

- Creating structured webpages using HTML components
- Tables: `<table>`, `<tr>`, `<th>`, `<td>`
- Merging table cells using `rowspan` and `colspan`
- HTML forms: `<form>`, `<label>`, `<input>`, `<textarea>`, `<button>`
- Form controls: dropdowns, radio buttons and checkboxes
- HTML5 semantic elements: `<header>`, `<nav>`, `<section>`, `<article>`, `<aside>`, `<footer>`
- Introduction to CSS
- Inline, internal and external CSS
- CSS syntax: selectors, properties and values
- Element, class and ID selectors
- Basic attribute selectors
- Text, font, background, border and spacing properties

Unit III: CSS Layout, Responsive Design and Webpage Project

- CSS Box Model: content, padding, border and margin
- `box-sizing`
- Display properties: `block`, `inline`, `inline-block`, `none`
- CSS positioning: `static`, `relative`, `absolute`, `fixed`, `sticky`
- Introduction to Flexbox
- Flexbox properties for webpage layout
- Introduction to CSS Grid
- Grid columns, rows and gaps
- Responsive web design
- Media queries
- CSS transitions and basic animations
- Combining HTML and CSS to reproduce webpage designs
- Final webpage design/project

Course Outcomes (COs):

CO1: Explain the basic concepts of HTML and identify the structure and components of an HTML document.

CO2: Create basic webpages using headings, paragraphs, lists, images, hyperlinks, tables, forms and other HTML elements.

CO3: Apply appropriate HTML tags and attributes to organise and present information effectively on a webpage.

CO4: Explain the purpose of CSS and apply inline, internal and external CSS to modify the appearance of HTML elements.

CO5: Use CSS selectors and properties to format text, colours, backgrounds, borders, spacing and other visual components of a webpage.

CO6: Apply the CSS Box Model, display properties, positioning, Flexbox and Grid to create organised webpage layouts.

CO7: Develop basic responsive webpages using media queries and adapt webpage layouts to different screen sizes.

CO8: Apply basic CSS transitions and animations to improve the visual presentation and interactivity of webpages.

CO9: Analyse a reference webpage design, identify its major components, and reproduce the design using appropriate HTML and CSS code.

CO10: Integrate HTML and CSS concepts to independently create a creative, structured and visually appealing webpage as a final practical project.