DR. VIRENDRA SWARUP INSTITUTE OF VOCATIONAL STUDIES

SYLLABUS

(DIPLOMA IN WEB DESIGNING)

COURSE CODE: COE13

COURSE NAME: CVESD DIPLOMA IN WEB DESIGNING

COURSE DURATION: SIX MONTHS

SESSION: 2024-25

DEPARTMENT OF COMPUTER APPLICATION

DR. VIRENDRA SWARUP INSTITUTE OF VOCATIONAL STUDIES, MC ROBERT GANJ, CIVIL LINES, KANPUR (UP) 208001

Course Code	Course Name	L	T	P
		3	0	0
01	Basic Principles involved in developing a website			

CO1	Understanding Web Fundamentals: Students will gain a foundational understanding of the basic concepts and technologies that underpin the World Wide Web, including the client-server model, HTTP protocol, URLs, and web browsers.
CO2	HTML Markup: Students will learn to create structured and semantic web documents using HTML (Hypertext Markup Language), including elements for text, links, images, lists, tables, forms, and semantic markup for enhanced accessibility and search engine optimization (SEO).
CO3	CSS Styling: Students will acquire skills in styling web content using CSS (Cascading Style Sheets), including techniques for applying colors, fonts, layout, and responsive design principles to enhance the visual presentation and usability of web pages.
CO4	Responsive Web Design: Students will understand the principles of responsive web design and learn techniques for creating websites that adapt and respond to different screen sizes and devices, including media queries, flexible grids, and fluid layouts.
CO5	Introduction to JavaScript: Students will be introduced to the basics of client-side scripting using JavaScript, including syntax, variables, data types, operators, control structures, functions, and event handling for interactive web experiences.

Course Outcomes: At the end of the course, the student will be able to,

UNIT-1

Introduction to website design, Purpose of website design, Overview of web technologies and history of the internet, Understanding web design principles, color theory, typography, and layout. Website design project -Applying web design and development principles to create a complete website, working in teams to develop a website, Collaborating on design and development, Final project presentation and critique.

UNIT-2

HTML-hypertext, hyper media, understanding basic HTML tools- HTML editor, web browser, General structure of HTML document, different types of elements-doc type, comment element, structural element, HTML tags and attributes: <html>, <body>, <head>, <title>, <h1>,... ,<h6>, <br>, <table>, <img>, <hr>, adding links, background image to the body, creating lists.

UNIT-3

CSS Fundamentals: Introduction to Cascading Style Sheets (CSS), Selectors and specificity, Box model (margins, padding, borders), Typography and fonts, Layout techniques (floats, flexbox, grid), Principles of responsive design.Media queries, Flexbox and grid for responsive layouts. Mobile-first design approach.

UNIT-4

Introduction to JavaScript,Variables, data types, and operators, Control flow (conditionals, loops),Functions and scope,DOM manipulation.

UNIT-5

Database Fundamentals: Introduction to databases,Relational vs. NoSQL databases,SQL basics (queries, CRUD operations),Introduction to ORM (Object-Relational Mapping),**Deployment and Maintenance:** Hosting options (shared hosting, VPS, cloud platforms). Deploying websites using FTP, SSH, or automated deployment tools, Domain management, Basic server administration, Website maintenance and updates.

UNIT-6

Project Work.

Referential Books :

1. Programming the World Wide Web -Book by Robert W. Sebesta
2. World Wide Web Design With Html-C Xavier

Course Code	Course Name	L	T	P
		3	0	0
02	Planning Process			

CO1	The first step is to clearly define the objectives and goals of the project or initiative. This involves identifying what needs to be achieved, why it is important, and how success will be measured.
CO2	Gather relevant information and data that will inform the planning process. This may include market research, stakeholder input, historical data, and other sources of information to help make informed decisions.
CO3	Based on the objectives, goals, and information gathered, develop strategies and plans to achieve them. This may involve outlining tasks, timelines, resources needed, and milestones to track progress.
CO4	Develop Strategies and Plans: Based on the objectives, goals, and information gathered, develop strategies and plans to achieve them. This may involve outlining tasks, timelines, resources needed, and milestones to track progress.
CO5	Determine the resources required to execute the plans effectively. This includes human resources, financial resources, technology, equipment, and any other resources needed to support the project.

UNIT-1

Introduction to Web Development Planning: Overview of the importance of planning in web development, Understanding the project lifecycle, Introduction to project management methodologies (e.g., Waterfall, Agile).

UNIT-2

Defining Project Goals and Requirements: Conducting stakeholder interviews, Identifying target audience and user personas, Defining project scope, objectives, and deliverables, Gathering functional and non-functional requirements.

UNIT-3

Wireframing and Prototyping: Introduction to wireframing and prototyping tools (e.g., Sketch, Adobe XD, Figma),Creating low-fidelity wireframes to visualize layout and structure, Iterative design process and feedback gathering, Prototyping interactions and user flows.
Information Architecture: Organizing content and navigation structure.

UNIT-4

Creating sitemaps and user flow diagrams, Principles of usability and user experience design, Accessibility considerations, **Content Strategy:** Developing a content strategy, Content auditing and inventory, Content creation and management plan, SEO basics and keyword research, **Technology Stack Selection:** Understanding different technology options (front-end frameworks, CMS platforms, server-side languages).

UNIT-5

Evaluating pros and cons of various technologies based on project requirements,Making informed decisions about the technology stack,Project Estimation and Scheduling, Techniques for estimating project timelines and resources, Creating project schedules and milestones, Resource allocation and

task assignment, Risk assessment and mitigation strategies, Client Communication and Collaboration, Effective communication strategies with clients and stakeholders, Managing client expectations, Collaboration tools and techniques (e.g., project management software, version control systems), Legal and Ethical Considerations, Intellectual property rights and copyright laws.

Privacy and data protection regulations (e.g., GDPR), Terms of service and usage policies, Documentation and Project Planning Tools, Importance of documentation in web development projects, Creating project documentation (e.g., project brief, requirements document, design specifications).

Referential Books :

1. Web Development: A Visual-Spatial Approach" by D. Duane Wessels
2. Planning and Designing Effective Websites: With Web Standards" by Adele Goldberg and Ken Schwaber.

Course Code	Course Name	L	T	P
		3	0	0
03	Rules of Web design			

CO1	Simplicity: Keep the design simple and focused. Avoid clutter and unnecessary elements that can distract users from the main purpose of the website.
CO2	Consistency: Maintain consistency in design elements such as colors, fonts, layouts, and navigation throughout the website. Consistency enhances usability and helps users navigate the site more easily.
CO3	Visual Hierarchy: Use visual hierarchy to prioritize content and guide users' attention to the most important elements on the page. Use techniques such as size, color, contrast, and spacing to create a clear hierarchy of information.
CO4	Responsive Design: Ensure that the website is responsive and adapts to different screen sizes and devices. This ensures a consistent user experience across desktops, tablets, and smartphones.
CO5	User-Centered Design: Design with the user in mind. Understand the target audience, their needs, preferences, and behavior, and design the website to meet those needs effectively.

UNIT-1

Introduction to Web Design Principles: Overview of the importance of design in web development, Introduction to design principles (e.g., balance, contrast, alignment, proximity), Understanding the impact of good design on user experience, **Visual Hierarchy and Typography:** Importance of visual hierarchy in guiding user attention, Understanding typography principles (font selection, size, spacing), Creating hierarchy with typography (headings, subheadings, body text), Accessibility considerations for typography.

UNIT-2

Color Theory and Usage: Basics of color theory (hue, saturation, brightness), Understanding color schemes (monochromatic, complementary, analogous), Using color to convey meaning and evoke emotions, Accessibility considerations for color contrast and color blindness, **Layout and Composition:** Principles of layout design (grid systems, whitespace, symmetry), Creating balanced compositions, Responsive design considerations for layouts, Designing effective navigation menus and call-to-action elements.

UNIT-3

Images and Graphics: Importance of visual imagery in web design, Guidelines for selecting and optimizing images, Using graphics for visual appeal and storytelling, Creating and using icons effectively, **User Interface (UI) Design:** Understanding user interface design principles, Designing intuitive and user-friendly interfaces, Creating effective forms and input elements, Incorporating feedback mechanisms (hover effects, animations).

UNIT-4

Responsive Design Principles: Basics of responsive web design, Principles of fluid layouts and media queries, Designing for different screen sizes and devices, Mobile-first design approach, **Interaction Design:** Understanding interaction design principles, Designing interactive elements (buttons, links, menus), Principles of user feedback and affordances, Creating engaging user experiences through animations and transitions, Accessibility and Inclusive Design: Importance of web accessibility.

UNIT-5

Designing for users with disabilities (screen readers, keyboard navigation), Guidelines for creating accessible websites (WCAG standards), Inclusive design practices for accommodating diverse user needs, **Usability Testing and Iterative Design:** Introduction to usability testing, Planning and conducting usability tests, Analyzing user feedback and making design improvements, Iterative design process for continuous improvement, **Case Studies and Project Work:** Analyzing real-world examples of effective web design, Applying design principles to project scenarios, Hands-on design exercises and projects to reinforce learning.

Referential Books :

1. "The Principles of Beautiful Web Design" by Jason Beaird
2. "Web Design: Principles and Practices" by B. Mahapatra:

Course Code	Course Name	L	T	P
		3	0	0
04	Page Design			

CO1	Determine the primary message or information that needs to be communicated to the audience. The design should support and reinforce this purpose.
CO2	Establish a clear hierarchy of information to guide the reader's attention and prioritize content. Important information should be emphasized and placed prominently, while less critical details can be presented in a secondary or tertiary manner.
CO3	Use whitespace strategically to create balance, separation, and visual breathing room between elements on the page. Whitespace helps to improve readability and draw attention to key content.
CO4	Appropriate fonts, sizes, and styles for text elements to enhance readability and convey the intended tone and personality of the content. Use a limited number of font families and styles for consistency and clarity.
CO5	Select a cohesive color scheme that complements the content and reinforces the brand identity or theme of the page. Use color strategically to highlight important elements, create visual interest, and establish hierarchy.

UNIT -1:

Introduction to Page Design Principles: Overview of the importance of page design in web development. Introduction to design principles specific to page layout (e.g., balance, proximity, contrast). Understanding the impact of page design on user experience. Grid **Systems and Layout Basics:** Introduction to grid systems in page design, Understanding grid structures and columns, Applying grid-based layouts to create balanced designs.
Exploring different types of grids (e.g., modular grids, hierarchical grids), Typography in Page Design, Importance of typography in page design, Principles of typography (font selection, size, spacing, hierarchy), Creating typographic harmony within page layouts, Implementing responsive typography for different screen sizes, Color Theory and Page Design: Basics of color theory as applied to page design. Understanding the psychological impact of colors.
Creating color schemes for cohesive page designs.

UNIT -2:

Using color to convey meaning and hierarchy within page layouts, Images and Graphics in Page Design: Importance of visual imagery in page design, Guidelines for selecting and optimizing images for web use, Incorporating graphics and icons into page layouts, Creating visual interest and enhancing user engagement through imagery,Whitespace and Visual Balance: Understanding the role of whitespace in page design.

UNIT -3:

Creating visual balance and harmony within page layouts, Utilizing whitespace to improve readability and focus, Implementing whitespace effectively in responsive designs, Responsive Page Design: Basics of responsive web design principles. Designing flexible page layouts for different screen sizes and devices. Implementing responsive images and media queries. Testing and optimizing page designs across various devices and resolutions. Navigation and Call-to-Action Design: Designing intuitive navigation menus and structures.

UNIT -4:
Placing emphasis on important elements through effective visual hierarchy, Creating compelling call-to-action elements to guide user interaction, Principles of user-centered design for navigation and interaction design, Accessibility in Page Design: Importance of accessibility considerations in page design, Designing for users with disabilities (e.g., screen readers, keyboard navigation).

UNIT -4:
Guidelines for creating accessible page layouts and content, Testing for accessibility compliance and making necessary adjustments, User Interface (UI) Elements and Interaction Design: Designing interactive elements (buttons, forms, tooltips). Incorporating feedback mechanisms to enhance user interaction. Principles of interaction design for improving user engagement. Creating consistent and intuitive UI patterns within page layouts. Case Studies and

Project Work: Analyzing real-world examples of effective page designs. Applying page design principles to project scenarios. Hands-on page design exercises and projects to reinforce learning.

Referential Books :

1. Designing Web Interfaces" by Tushar Kapoor
2. "The Principles of Beautiful Web Design" by Jason Beaird

Course Code	Course Name	L	T	P
		3	0	0
05	Home Page Layout			

CO1	Determine the primary message or information that needs to be communicated to the audience. The design should support and reinforce this purpose.
CO2	Establish a clear hierarchy of information to guide the reader's attention and prioritize content. Important information should be emphasized and placed prominently, while less critical details can be presented in a secondary or tertiary manner.
CO3	Use whitespace strategically to create balance, separation, and visual breathing room between elements on the page. Whitespace helps to improve readability and draw attention to key content.
CO4	Appropriate fonts, sizes, and styles for text elements to enhance readability and convey the intended tone and personality of the content. Use a limited number of font families and styles for consistency and clarity.
CO5	Select a cohesive color scheme that complements the content and reinforces the brand identity or theme of the page. Use color strategically to highlight important elements, create visual interest, and establish hierarchy.

UNIT 1

Fundamentals of Web, XHTML – 1: Internet, WWW, Web Browsers and Web Servers, URLs, MIME, HTTP, Security, The Web Programmers Toolbox. XHTML: Basic syntax, Standard structure, Basic text markup, Images, Hypertext Links.

UNIT – 2

XHTML – 2, CSS: XHTML (continued): Lists, Tables, Forms, Frames CSS: Introduction, Levels of style sheets, Style specification formats, Selector forms, Property value forms, Font properties, List properties, Color, Alignment of text, The box model, Background images, The and tags, Conflict resolution.

UNIT – 3

Javascript: Overview of Javascript, Object orientation and Javascript, Syntactic characteristics, Primitives, operations, and expressions, Screen output and keyboard input, Control statements, Object creation and modification, Arrays, Functions, Constructors, Pattern matching using regular expressions, Errors in scripts, Examples.

UNIT – 4

Javascript and HTML Documents, Dynamic Documents with Javascript: The Javascript execution environment, The Document Object Model, Element access in Javascript, Events and event handling, Handling events from the Body elements, Button elements, Text box and Password elements, The DOM 2 event model, The navigator object, DOM tree traversal and modification. Introduction to dynamic documents, Positioning elements, Moving elements, Element visibility, Changing colors and fonts, Dynamic content, Stacking elements, Locating the mouse cursor, Reacting to a mouse click, Slow movement of elements, Dragging and dropping elements.

UNIT-5

Project Work

RECOMMENDED BOOK

1. Robert W. Sebesta: World Wide Web, 4th Edition, Pearson education, 2008.
2. M. Deitel, P.J. Deitel Internet & World Wide Web How to Program, 3rd Edition, Pearson education, 2004.

Course Code	Course Name	L	T	P
		3	0	0
06	Design Concept			

CO1	Understanding Web Fundamentals XML : Students will gain a foundational understanding of the basic concepts and technologies that underpin the World Wide Web, including the client-server model, HTTP protocol, URLs, and web browsers.
CO2	HTML Markup: Students will learn to create structured and semantic web documents using HTML (Hypertext Markup Language), including elements for text, links, images, lists, tables, forms, and semantic markup for enhanced accessibility and search engine optimization (SEO).
CO3	CSS Styling: Students will acquire skills in styling web content using CSS (Cascading Style Sheets), including techniques for applying colors, fonts, layout, and responsive design principles to enhance the visual presentation and usability of web pages.
CO4	Responsive Web Design: Students will understand the principles of responsive web design and learn techniques for creating websites that adapt and respond to different screen sizes and devices, including media queries, flexible grids, and fluid layouts.
CO5	Introduction to JavaScript: Students will be introduced to the basics of client-side scripting using JavaScript, including syntax, variables, data types, operators, control structures, functions, and event handling for interactive web experiences.

UNIT 1

XML: Introduction, Syntax, Document structure, Document type definitions, Namespaces, XML schemas, Displaying raw XML documents, Displaying XML documents with CSS, XSLT style sheets, XML processors, Web services.

UNIT – 2

Perl, CGI Programming: Origins and uses of Perl, Scalars and their operations, Assignment statements and simple input and output, Control statements, Fundamentals of arrays, Hashes, References, Functions, Pattern matching, File input and output; Examples. The Common Gateway Interface; CGI linkage; Query string format; CGI.pm module; A survey example; Cookies. Database access with Perl and MySQL

UNIT – 3

PHP: Origins and uses of PHP, Overview of PHP, General syntactic characteristics, Primitives, operations and expressions, Output, Control statements, Arrays, Functions, Pattern matching, Form handling, Files, Cookies, Session tracking, Database access with PHP and MySQL.

UNIT – 4

Ruby, Rails: Origins and uses of Ruby, Scalar types and their operations, Simple input and output, Control statements, Arrays, Hashes, Methods, Classes, Code blocks and iterators, Pattern matching. Overview of Rails, Document requests, Processing forms, Rails applications with Databases, Layouts.

UNIT-5

Project Work

RECOMMENDED BOOK

1. Robert W. Sebesta: World Wide Web, 4th Edition, Pearson education, 2008.
2. M. Deitel, P.J. Deitel Internet & World Wide Web How to Program, 3rd Edition, Pearson education, 2004.

Course Code	Course Name	L	T	P
		3	0	0
07	HTML			

CO1	Understanding Web Fundamentals XML : Students will gain a foundational understanding of the basic concepts and technologies that underpin the World Wide Web, including the client-server model, HTTP protocol, URLs, and web browsers.
CO2	HTML Markup: Students will learn to create structured and semantic web documents using HTML (Hypertext Markup Language), including elements for text, links, images, lists, tables, forms, and semantic markup for enhanced accessibility and search engine optimization (SEO).
CO3	CSS Styling: Students will acquire skills in styling web content using CSS (Cascading Style Sheets), including techniques for applying colors, fonts, layout, and responsive design principles to enhance the visual presentation and usability of web pages.
CO4	Responsive Web Design: Students will understand the principles of responsive web design and learn techniques for creating websites that adapt and respond to different screen sizes and devices, including media queries, flexible grids, and fluid layouts.
CO5	Introduction to JavaScript: Students will be introduced to the basics of client-side scripting using JavaScript, including syntax, variables, data types, operators, control structures, functions, and event handling for interactive web experiences.

UNIT 1

Introduction to HTML: Overview of HTML and its role in web development, History and evolution of HTML, Understanding the structure of HTML documents, Setting up development environment (text editor, browser),HTML Basics: Basic syntax of HTML tags and elements, Creating HTML documents (DOCTYPE declaration, <html>, <head>, <body>).

UNIT 2

Text formatting tags (e.g., <p>, <h1> to <h6>, ,), Creating hyperlinks (<a>), images (<img>), and lists (<ul>, <ol>, <li>), HTML Semantic Elements: Introduction to semantic HTML. Using semantic elements for better accessibility and SEO. Semantic tags like <header>, <nav>, <main>, <section>, <article>, <footer>. Importance of semantic markup for screen readers and search engines.

UNIT 3

HTML Forms: Creating forms using <form> tag, Form input elements (text fields, password fields, radio buttons, checkboxes, etc.), Form submission methods (GET vs. POST), Form validation using HTML attributes (required, pattern, etc.), Tables in HTML: Creating tables using <table>, <tr>, <td>, and <th> tags, Adding headers, footers, and captions to tables, Styling tables with CSS (basic introduction). HTML5 Multimedia Elements: Embedding audio and video using <audio> and <video> tags. Using attributes for playback control and media source. Providing fallback content for unsupported browsers. HTML5 Structural Elements: Introduction to HTML5 structural elements. Using <header>, <nav>, <main>, <section>, <article>, <aside>, <footer> for layout. Creating responsive layouts with HTML5 structural elements. HTML5 Canvas and SVG Introduction to HTML5 Canvas for drawing graphics.

UNIT-4

HTML Metadata and SEO: Understanding HTML metadata tags (<title>, <meta>, <link>), Importance of metadata for search engine optimization (SEO), Adding metadata for social sharing (Open Graph protocol, Twitter Cards), HTML Accessibility: Importance of accessibility in web development. Writing accessible HTML code (semantic markup, alt attributes, tabindex, ARIA roles).Testing and validating HTML for accessibility compliance. HTML Best Practices and Optimization: Best practices for writing clean and maintainable HTML code.

UNIT-5

Optimizing HTML for performance (minification, reducing HTTP requests), Tools and techniques for HTML validation and debugging, Project Work and Case Studies: Applying HTML concepts to real-world projects. Building a website or web application using HTML. Analyzing and discussing case studies of HTML usage in popular websites.

UNIT-6

Project Work

RECOMMENDED BOOK

1. Robert W. Sebesta: World Wide Web, 4th Edition, Pearson education, 2008.
2. M. Deitel, P.J. Deitel Internet & World Wide Web How to Program, 3rd Edition, Pearson education, 2004.

Course Code	Course Name	L	T	P
		3	0	0
08	CASCADING STYLE SHEET (CSS)			

CO1	Understanding CSS Fundamentals: Students will gain a solid understanding of the fundamentals of CSS, including syntax, selectors, properties, values, and the box model.
CO2	Proficiency in CSS Styling: Students will develop proficiency in using CSS to style HTML elements and create visually appealing and responsive web designs.
CO3	Layout Techniques: Students will learn various layout techniques using CSS, including float-based layouts, flexbox, and CSS Grid, to create flexible and responsive page layouts.
CO4	Typography and Fonts: Students will explore CSS techniques for styling text, including font properties, text alignment, spacing, and custom font usage, to enhance readability and visual appeal.
CO5	Colors and Backgrounds: Students will learn to use CSS to apply colors, gradients, and background images to elements, adding visual interest and depth to web pages.

UNIT 1

Introduction to CSS: Overview of CSS and its role in web development, History and evolution of CSS. Understanding the separation of content and presentation. Basic CSS Syntax and Selectors: Basic syntax of CSS rules (selectors, properties, values). Different types of CSS selectors (element, class, ID, attribute). Applying CSS styles inline, internal, and external stylesheets. CSS Box Model: Understanding the CSS box model (content, padding, border, margin). Box sizing property and its impact on layout. Applying box model properties to control layout and spacing. Typography and

UNIT 2

Text Styling: Styling text with CSS (font properties, text alignment, text decoration).Creating custom font stacks and importing web fonts. Applying text effects (text shadows, text transformation). CSS Layout Techniques: Introduction to CSS layout models (normal flow, floats, positioning). Creating layouts using float and clear properties. Understanding positioning (static, relative, absolute, fixed). Flexbox and CSS Grid for modern layout design.

UNIT 3

CSS3 Features: Introduction to CSS3 features and enhancements. Using CSS3 transitions and nimations for visual effects. Creating gradients, shadows, and rounded corners with CSS3, Applying transformations (rotate, scale, skew) with CSS3. Responsive Web Design with CSS: Basics of responsive web design principles. Using media queries to create responsive layouts, Designing flexible and fluid layouts for different devices.

UNIT-4

Implementing responsive images and videos with CSS, CSS Preprocessors: Introduction to CSS preprocessors (e.g., Sass, Less). Setting up and configuring a CSS preprocessor workflow.
Using variables, mixins, and functions in CSS preprocessors. Compiling preprocessors into standard CSS for browser compatibility. CSS Frameworks: Overview of CSS frameworks (e.g., Bootstrap, Foundation). Using CSS frameworks for rapid prototyping and responsive design.

Customizing and extending CSS frameworks to meet project requirements. CSS Architecture and Best Practices: Writing maintainable and scalable CSS code. Organizing CSS code using naming

conventions and file structure. Avoiding common CSS pitfalls and anti-patterns. Implementing CSS methodologies like BEM (Block, Element, Modifier).

UNIT-5

CSS Optimization and Performance: Techniques for optimizing CSS for performance (minification, concatenation). Reducing CSS specificity and redundancy. Tools for analyzing and optimizing CSS code. Implementing critical CSS for faster page load times. Project Work and Case Studies:
Applying CSS concepts to real-world projects. Building responsive and visually appealing web interfaces using CSS. Analyzing and discussing case studies of CSS usage in popular websites.

RECOMMENDED BOOK

1. Robert W. Sebesta: World Wide Web, 4th Edition, Pearson education, 2008.
2. M. Deitel, P.J. Deitel Internet & World Wide Web How to Program, 3rd Edition, Pearson education, 2004.

Course Code	Course Name	L	T	P
		3	0	0
09	WORDPRESS			

CO1	Understanding WordPress Basics: Students will gain a foundational understanding of WordPress, including its history, architecture, and core features.
CO2	Installation and Setup: Students will learn how to install WordPress locally and on a web server, as well as configure basic settings such as permalinks, site title, and tagline.
CO3	Content Creation and Management: Students will develop skills in creating and managing content in WordPress, including creating posts, pages, categories, and tags, as well as organizing content with menus and taxonomies.
CO4	Theme Customization: Students will learn how to customize the appearance of WordPress websites using themes, including customizing colors, fonts, layouts, and other design elements.
CO5	Plugin Installation and Configuration: Students will explore the wide range of plugins available for WordPress and learn how to install, activate, and configure plugins to add functionality to their websites.

UNIT 1

Introduction to WordPress: Overview of WordPress and its history. Understanding the role of ordPress in web development. Installing WordPress locally and on a web server. Getting Started with WordPress: Exploring the WordPress Dashboard. Understanding the difference between posts and pages. Creating and managing user accounts and profiles. WordPress Themes: Introduction to WordPress themes. Installing and activating themes from the WordPress Theme Directory. Customizing themes using the WordPress Customizer. Exploring premium themes and child themes.

UNIT 2

WordPress Plugins: Introduction to WordPress plugins. Installing and activating plugins from the WordPress Plugin Directory. Exploring essential plugins for security, SEO, performance, and functionality. Understanding plugin settings and configurations. Creating Content with WordPress: Creating and editing posts and pages. Formatting text and adding media (images, videos, audio). Using categories and tags to organize content. Understanding the WordPress content editor (Gutenberg).

UNIT 3

WordPress Site Customization: Customizing site identity (site title, tagline, logo). Creating custom menus and navigation. Adding widgets to sidebars and footer areas. Implementing custom CSS for site styling. WordPress Site Management: Managing comments and discussions. Understanding user roles and permissions. Backing up and restoring WordPress sites. Updating WordPress core, themes, and plugins. WordPress Security: Understanding common security threats to WordPress sites. Implementing best practices for securing WordPress installations. Using security plugins to protect against vulnerabilities. Monitoring and responding to security incidents. WordPress SEO (Search Engine Optimization): Introduction to SEO and its importance for WordPress sites. Optimizing content for search engines (keywords, meta tags). Using SEO plugins to improve site visibility and ranking.

UNIT 4

Analyzing site performance with SEO tools. WordPress E-Commerce with WooCommerce: Introduction to WooCommerce plugin for e-commerce. Setting up an online store with ooCommerce. Managing products, orders, and payments. Customizing the appearance and unctionality of the WooCommerce store. WordPress Multisite: Understanding WordPress Multisite functionality. Setting up and configuring a WordPress Multisite network. Managing multiple sites within a Multisite network. Implementing custom themes and plugins for Multisite.

UNIT 5

WordPress Development and Advanced Topics: Introduction to WordPress development (themes, plugins, child themes). Customizing WordPress themes and templates. Creating custom post types and taxonomies. Integrating third-party APIs and services with WordPress. WordPress Project Work and Case Studies: Applying WordPress concepts and skills to real-world projects. Building and customizing WordPress sites based on client requirements. Analyzing and discussing case studies of WordPress usage in various industries.

RECOMMENDED BOOK

1. Professional WordPress: Design and Development" by Brad Williams
2. WordPress: Building Responsive WordPress Websites" by Rohan Mehta

Course Code	Course Name	L	T	P
		3	0	0
10	User Interface (UI) / User Experience (UX)			

CO1	Students will gain a foundational understanding of the principles, concepts, and methodologies of user interface (UI) and user experience (UX) design.
CO2	Students will learn techniques for conducting user research, including user interviews, surveys, usability testing, and competitive analysis, to gather insights and understand user needs and preferences.
CO3	Students will understand principles of information architecture and learn to organize and structure information in a logical and intuitive manner to facilitate navigation and findability for users.
CO4	Students will develop skills in creating wireframes and prototypes to visualize and communicate design concepts, interactions, and flows before implementation.
CO5	Students will explore principles of visual design such as typography, color theory, layout, and imagery, and learn how to apply them to create aesthetically pleasing and cohesive UI designs.

UNIT 1

USER INTERFACE(UI) : Cognitive Studies for better User Experience , Gestalt principles , Visual design - color theory, typography , Using graphics and illustrations to finalise designs , Use of Writing in UI Design , Microcopy , User Interface elements , UI controls/patterns , Types of disabilities , Accessibility in design Prototype - Designing/Testing/Fidelity , Paper Prototyping, Wireframing , Digital Prototype , HTML Prototype, Grid and layout systems, Information architecture, Content audit, Information architecture and card sorting methods .

UNIT 2

Exact Organization Schemes - alphabetical, chronological, geographical, Ambiguous Organizational Schemes - topic or subject, task, audience, hybrids , How to navigate through the system.Flat vs. Deep Hierarchies, Navigation – Primary and , econdary, Associative Navigation, Sequential Navigation, Breadcrumb Navigation, Click versus , lock, Creating Error Messages

UNIT-3

User Experience(UX): User Interface , Differences between UX and UI , Factors influencing User Experience, 'User Experience Honeycomb' by Morville - detailed with examples, UCD (User centered design) process, Conceptualisation and ideation , User's mental model , Products designed on user's mental model

UNIT-4

Persona mapping , Storyboarding, Journey mapping and task flows , Scenario Mapping, Empathy mapping, Types of UX research, When to research?, Data gathering methods and sources, Expert Review, Interviews, Surveys and Email Questionnaire, Observation - Eye Tracking, Clickstream analysis, Focus group, user groups, market segments, Competitor analysis

RECOMMENDED BOOK

1. Don't Make Me Think: A Common Sense Approach to Web Usability" by Steve Krug
2. The Design of Everyday Things" by Don Norman

Course Code	Course Name	L	T	P
		3	0	0
11	Java Script			

CO1	Students will gain a solid understanding of the fundamentals of JavaScript, including syntax, data types, variables, operators, control structures, and functions.
CO2	Students will learn how to manipulate the Document Object Model (DOM) using JavaScript to dynamically update and interact with HTML elements on web pages.
CO3	Students will understand how to handle user interactions and events such as clicks, mouse movements, keyboard input, and form submissions using JavaScript event handling techniques.
CO4	Students will learn advanced concepts related to functions and scope in JavaScript, including function declarations, expressions, closures, and lexical scope.
CO5	Students will explore JavaScript's built-in data structures such as arrays and objects, including methods for manipulating and iterating over arrays and accessing object properties.

UNIT 1

What is JavaScript, General overview of JavaScript, What is Javascript, JavaScript history, Relation between JavaScript and ECMAScript, Versions of JavaScript, JavaScript Core, Syntax, Variables, Values, Data Types, Syntax review, Keywords and reserwed words, Variable declaration, Variable scope, Block scope.

UNIT 2

Data Types, Primitive values, Reference values, Types, Type convertion, Expressions and Operators, Expressions (arithmetic, relational, logical, assigment and others), Operators overview.
Control structures, Flow control and conditionals, Loops and iteration, Jumps, Error handling, Throwing errors, Error handling, Numbers, Number literals, Number object, Number methods, Math object, Date object, Working with Numbers.

UNIT 3

Strings, String literals, String object, String methods, Working with Strings, Arrays, Creating and populating Arrays, Array methods, Working with Arrays, Functions, Defining functions,Calling functions, Functions as values, Arguments and parameters, Function scope, Closures, Arrow functions, Indexed Collections, Set object type, Map object type, JSON, Iterators and generators, Working with Iterators, Working with Generators, Modules, Promises, Regular Expressions, Creating regular expressions, RegExp object and its methods, String methods for matching patterns.

UNIT 4

Objects, Creating object, Properties, Methods, Build-in JavaScript objects, Prototype based Object Oriented Programming, Defining Constructors, Prototypes, Inheritance, Classes, Multiprogramming Proxy, Reflection

RECOMMENDED BOOK

1. Don't Make Me Think: A Common Sense Approach to Web Usability" by Steve Krug
2. The Design of Everyday Things" by Don Norman

Course Code	Course Name	L	T	P
		3	0	0
12	Digital Platform & Output			

CO1	Understanding Digital Platforms: Students will gain an understanding of various digital platforms and output formats used for content creation, distribution, and consumption, including websites, social media, mobile apps, and multimedia platforms.
CO2	Content Creation Tools: Students will learn how to use digital tools and software for creating and editing content in different formats, such as text, images, graphics, audio, and video.
CO3	Web Development Basics: Students will acquire basic skills in web development, including HTML, CSS, and JavaScript, to create and customize digital content for the web.
CO4	Social Media Management: Students will learn strategies and techniques for managing social media platforms, including content planning, scheduling, engagement, analytics, and community management.
CO5	Search Engine Optimization (SEO): Students will understand the principles of search engine optimization (SEO) and learn techniques for optimizing digital content to improve its visibility and ranking in search engine results pages (SERPs).

UNIT 1

Introduction to Digital Platforms: Overview of digital platforms and their significance in modern business. Understanding the digital ecosystem and various platforms (social media, e-commerce, content management systems, etc.). Exploring the impact of digital platforms on consumer behavior and business strategies. Types of Digital Platforms: Social Media Platforms: Introduction to popular social media platforms (Facebook, Instagram, Twitter, LinkedIn, etc.), their features, and usage scenarios.

UNIT 2

E-commerce Platforms: Overview of e-commerce platforms (Shopify, WooCommerce, Magento, etc.), their features, and customization options. Content Management Systems (CMS): Introduction to CMS platforms (WordPress, Drupal, Joomla, etc.), their features, and use cases. Digital Content Creation: Understanding digital content creation processes and tools. Creating content for different digital platforms (text, images, videos, infographics). Basics of content strategy, storytelling, and brand consistency in digital content creation.

UNIT 3

Search Engine Optimization (SEO): Introduction to SEO principles and techniques. Understanding search engine algorithms and ranking factors. On-page and off-page optimization strategies. Tools and analytics for monitoring and improving SEO performance. Social Media Management: Basics of social media marketing and management. Creating and optimizing social media profiles. Content planning, scheduling, and posting on social media platforms. Engaging with followers and managing social media communities. E-commerce Operations: Setting up and managing an online store. Product listing, pricing, and inventory management. Payment gateways and secure ransactions. Order fulfillment, shipping, and customer support.

UNIT 4

Content Management and Publishing: Understanding content management systems (CMS) and their features. Creating and managing website content using CMS platforms. Customizing themes and templates for website design. Publishing and updating content on digital platforms. Analytics and Performance Monitoring: Introduction to digital analytics tools (Google Analytics, Facebook Insights, etc.). Tracking key performance indicators (KPIs) for digital platforms. Interpreting analytics data to measure and improve performance.

UNIT 5

A/B testing and optimization strategies based on analytics insights. Digital Marketing Strategies: Overview of digital marketing channels and tactics. Developing digital marketing campaigns for different platforms. Integration of paid advertising, content marketing, email marketing, and other digital marketing channels. Creating and executing digital marketing plans. Mobile and Responsive Design: Understanding mobile platforms and responsive design principles. Designing and optimizing digital content for mobile devices. Testing and ensuring cross-device compatibility.

UNIT-6

Digital Security and Compliance: Understanding digital security risks and threats. Implementing security measures to protect digital assets. Compliance with data protection regulations (GDPR, CCPA, etc.). Best practices for securing digital platforms and user data. Emerging Trends in Digital Platforms: Exploring emerging technologies and trends in digital platforms (AI, VR, AR, voice search, etc.). Understanding the impact of emerging trends on digital marketing and business strategies. Anticipating future developments and adapting digital strategies accordingly.

RECOMMENDED BOOK

1. Digital Marketing For Dummies" by Ryan Deiss and Russ Henneberry
2. Digital Marketing: Strategy, Implementation and Practice" by Dave Chaffey, Fiona Ellis-Chadwick, Kevin Johnston, and Debra Zahay

Course Code	Course Name	L	T	P
		3	0	0
13	Basic Image Editing			

CO1	Understanding Image Editing Concepts: Students will gain a foundational understanding of image editing concepts, including resolution, color modes, file formats, and basic editing techniques.
CO2	Introduction to Image Editing Software: Students will be introduced to popular image editing software such as Adobe Photoshop, GIMP, or Pixlr, and learn how to navigate the interface and use basic tools and features.
CO3	Image Enhancement: Students will learn techniques for enhancing images, including adjusting brightness, contrast, saturation, and sharpness to improve overall image quality.
CO4	Crop and Resize: Students will understand how to crop and resize images to remove unwanted elements, adjust composition, and prepare images for various output formats and sizes.
CO5	Color Correction: Students will learn color correction techniques to correct white balance, remove color casts, and adjust color tones to achieve desired results in images.

UNIT 1

Introduction to Graphics Introduction to multimedia, concept of graphics-bitmap images, vector graphics, Color channels, Bit depth, Image size and resolution, graphic file format, vector based format, optimizing web graphics, aliased text vs. anti-aliased text, tolerance and opacity in image, floating, selection (move, rotate, scale),set tolerance and opacity in image with different tools Different color mode-RGB mode (millions of colors),CMYK mode (four-printed colors), Index mode (256 colors), Grayscale mode (256 grays), Bitmap mode (2 colors),LAB color mode, Adjust color hue, saturation, and brightness, browser safe colors, Shadows, highlights and midtones of an image

UNIT 2

Fundamentals of Image editing Basics of Image editing, the Image editing interface, need of image editing, create documents(new, save different format, modify, search), Image editing palettes, The Image editing Toolbox and Options bar, Using Guides and Ruler Different file formats for file importing and exporting, modes of image in image editing (open image, create image, save file, modify file), modes of image editing (open, copy, rotate, brightness, contrast, color balance, crop, resize), color in image editing with numeric values and hexadecimal values, different transformation tools(free, rotate, skew, distort and perspective, move, flip horizontal and flip vertical

UNIT-3

Advanced features of Image editing Different Image editing tools-Selection tools, Crop and slice tools, Measuring tools ,retouching tool, painting tools, Drawing and type tools Introduction to layer, different types of layers-background layer, image layer, adjustment layer, text/line layer, fill layer, shape layer, Empty layer, duplicate layers, Neutral Layers, Layer Pallets and actions, layer features, Image composting using layers Restoration and enhancement of images - Color balance with image, adjust/change brightness and contrast.

UNIT-4

Changing hue saturation and brightness, Histogram, Gradient map, Desaturate, Invert, color replace, selection of different color , Equalize, Threshold, Channel mixer, Posterize Editing and special effects of Text- Text Tool-vertical and horizontal text tool, point and paragraph text creation, Using horizontal and vertical type mask tools, Using character palette for text editing, choosing a font, changing the type color, choosing a type sizeSpecifying kerning and tracking, using fractional character widths, specifying baseline shift, Applying underline and strikethrough, Text alignment and justification, Specifying anti-aliasing, creating text wrap or adding effects to text, Rasterizing type

RECOMMENDED BOOK

1. Lesa Snider, Image editing CC: The missing manual, O'Reilly Media
2. Fuller, Laurie Ulrich, Image editing CS3 Bible, Wiley
3. Todd Perkins, Adobe Flash Professional CS5/CS6 Bible, Wiley India Edition.
4. Robert Reinhardt and Joey Lott, Flash MX 2004 Actionscript Bible , Wiley