



बिरसा मुंडा ट्रायबल युनिवर्सिटी Birsa Munda Tribal University

राजपिपला, जि० नर्मदा Rajpipla, Dist. Narmda

Established by Tribal Development Department, Govt. of Gujarat

School of Computer Science

P.G.D.C.A. (Post Graduate Diploma in Computer Applications) Programme

Subject Code & Name: PGDCA104-1- Introduction to Web Programming

Teaching And Evaluation Scheme:

Teaching Scheme				Examination Scheme			
Credits				Component Weightage			
				CCE		SEE	
L	T	P	Total	TH	PWE	TH	PWE
4	-	-	4	50%	-	50%	-

Programme Name	P.G.D.C.A.
Semester	1
Course Code	PGDCA104-1
Course Title	Introduction to Web Programming
Course Content Type (Th. / Pr.)	Th.
Course Credit	4
Sessions + Lab Per Week	4
Total Teaching/ Lab Hours	60
* 2 Lab = 1 session	

Learning Objectives

Upon successful completion of this course, students will be able to:

- Understand the fundamental concepts of web technologies and client-side web development
- Design static and dynamic web pages with the use of HTML tags.
- Apply CSS to design attractive, responsive and user-friendly web pages
- Learn the fundamental of JavaScript to create interactive web pages and dynamic website features



Learning Outcomes

After successful completion of the course, students will be able to:

- Explain the basic concepts of web programming, website, browsers and web services
- Create structured web pages using HTML elements, forms, tables, lists, links and multimedia tags
- Design visually appealing webpages using CSS properties, layouts, colors and responsive design techniques
- Apply concepts of JavaScript with form validation, DOM manipulation in webpage

CLO-PLO Mapping Matrix:

CLOs/PLOs	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6
CLO1	3	1	2	2	1	2
CLO2	3	2	3	2	2	2
CLO3	3	2	3	3	2	2
CLO4	3	3	3	3	2	3

Detailed Contents

Unit	Topic/Sub Topic	Teaching Hours
I Introduction to Internet & HTML	Introduction to Web technology • Component of a browser window and overview of browser functionalities • client-server model Introduction to HTML: • Definition of HTML • Versions of HTML • Basic Structure of HTML Document • Tags, Elements, Attributes • HTML Editors and Browsers Text Formatting and Page Elements: • Headings • Paragraphs • Line Break • Horizontal Rule • Bold, Italic, Underline • Superscript / Subscript • Comments • Special Characters Lists and Links • Ordered List • Unordered List	15



	• Definition List • Hyperlinks	
II HTML Tags	Images and Multimedia • Insert Images • Image Attributes • Image as Link • Audio Tag • Video Tag Tables • Table Structure • Rows and Columns • Table Heading • Cell Padding / Spacing • Colspan and Rowspan • Nested Tables Forms • Form Tag • Input Types • Textbox • Password • Radio Button • Checkbox • Select / Dropdown • Textarea • Submit / Reset Button • Labels Semantic HTML5 • Header • Footer • Nav • Section • Main	15
III CSS	Introduction to CSS • What is CSS? • Need of CSS in Web Design Types of CSS: • Inline CSS • Internal CSS • External CSS CSS Syntax and Selectors • Syntax of Core CSS • Selectors: Element Selector, Class Selector, ID Selector, Group Selector, Universal Selector • Comments in CSS • Colors in CSS	15

	• Background Properties Text Properties • Color • Text Alignment • Text Decoration • Text Transform • Text Indentation • Letter Spacing • Word Spacing • Line Height • Font Family • Font Size • Font Style • Font Weight Table Properties and CSS Box Model • Styling Tables using CSS • Border Properties • Width and Height • Padding • Margin • Border Radius • Table Layout • Border Collapse • CSS Box Model: ○ Content ○ Padding ○ Border ○ Margin List Properties • Ordered and Unordered List Styling • list-style-type • list-style-position • list-style-image • Custom Bullet Design Cursor Style Properties • cursor: pointer • cursor: help • cursor: wait • cursor: move • cursor: text • cursor: not-allowed • Custom Cursor Basics Layout Basics • Display Property • Block and Inline Elements	
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	• Visibility • Overflow • Float • Clear Responsive Basics • Viewport • Relative Units (% , em, rem)	
IV JavaScript	JavaScript • Introduction to JavaScript • Features of JavaScript • Uses of JavaScript in Web Development • Client-side vs Server-side Scripting • JavaScript in HTML • Internal and External JavaScript • Comments in JavaScript Basic Syntax and Variables • JavaScript Syntax • Statements • Variables (var, let, const) • Data Types: ○ Number ○ String ○ Boolean ○ Null ○ Undefined • Operators: ○ Arithmetic ○ Assignment ○ Comparison ○ Logical Control Statements • Conditional Statements • Looping Statements • break and continue Functions • Function Declaration • Function Parameters • Return Statement • Anonymous Functions • Basics of Arrow Functions Arrays and Strings • Arrays • Array Methods (push, pop, length) • String Methods • Template Literals	15

	Events and DOM Basics • Introduction to DOM • Selecting Elements • Changing Text and Style • Events: ○ Onclick ○ Onmouseover ○ Onchange ○ onsubmit Form Validation • Input Validation • Required Fields • Email Validation • Password Rules • Error Messages Browser Objects and Dialog Boxes • alert() • prompt() • confirm() • console.log() • introduction to window Object	
Reference Books		
1. Bayross, I. (2004). Web enabled commercial applications development using HTML, DHTML, JavaScript, Perl CGI. BPB Publications. 2. Xavier, C. (2007). <i>Web technology & design</i>. New Age International 3. Jackson, J. C. (2006). <i>Web technologies</i>. Pearson India.		
Web Resources		
1. https://html.spec.whatwg.org/ 2. https://www.geeksforgeeks.org/html/html-tutorial/ 3. https://www.tutorialspoint.com/css/index.htm 4. https://www.w3schools.com/js/		

L:: Lecture, **T::** Tutorial, **P::** Practical

CCE:: Continuous & Comprehensive Evaluation

(CCE theory includes Mid Semester Examination, Assignment, MCQ Quizzes, Seminar, Reflective Notes, Class Participation, Case Analysis and Presentation, Slip Tests (Announced/ Surprised), Attendance etc. or any combination of these)

PWE: Practical Work Examination

(PWE includes Laboratory Practical Work, Project Work, Viva simulation exercise work etc.)

SEE:: Semester End Evaluation

