



# GUJARAT TECHNOLOGICAL UNIVERSITY

Program Name: Master of Computer Applications

Level: Post Graduate

Course / Subject Code:

Course / Subject Name: Web Technology Project

w. e. f. Academic Year:	2024-25
Semester:	1
Category of the Course:	Core Course

<b>Prerequisite:</b>	Basic computer knowledge.
<b>Rationale:</b>	<ul style="list-style-type: none"><li>The aim of the course is to provide knowledge of web as a tool in presenting information.</li><li>Understand basic web languages and its components.</li><li>Students can develop a dynamic webpage by the use of HTML, JavaScript and DHTML.</li></ul>

## Course Outcome:

After Completion of the Course, Student will able to:

No.	Course Outcomes	RBT Level*
CO1	Develop web pages using HTML and HTML5 tags and validators.	AP
CO2	Implement client side scripting using Javascript and apply styling using CSS in web pages.	CR
CO3	Develop navigation, events and controlling elements of Angular JS in web pages.	CR
CO4	Design dynamic web applications using PHP.	CR
CO5	Configure Laravel framework and develop database driven PHP web applications	CR

\*RM: Remember, UN: Understand, AP: Apply, AN: Analyze, EL: Evaluate, CR: Create

## Teaching and Examination Scheme:

Teaching Scheme (in Hours)			Total Credits L+T+ (PR/2)	Assessment Pattern and Marks				Total Marks
L	T	PR		Theory		Tutorial / Practical		
		ESE (E)	PA / CA (M)	PA/CA (I)	ESE (V)			
3	0	2	4	70	30	20	30	150



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## Course Content:

Unit No.	Content	No. of Hours	% of Weightage
1	<b>HTML, XHTML, HTML5 &amp; DHTML</b>  Introduction: HTML, Tags and Attributes, HTML File Structure, Meta, Title, Body  Common HTML Tags: Headings, Anchor, Links, Lists, Table, Frames, Forms  XHTML: HTML Validator, Block and Inline Elements  Introduction to HTML5  DHTML: Introduction to Dynamic Html	6	15
2.	<b>CSS &amp; JavaScript</b>  Page Designing with CSS:  CSS Declarations, Using CSS, Sample CSS File, Selectors, Box Model Concept, Padding, Float and Clear, Z-Index, Websites  Benefits of CSS  Client-side Scripting:  Introduction to JavaScript, Basic Syntax, Variables, Identifiers, DataTypes and Values, Scope, Literals, Reserved Words, Operators and Statements, Functions, Objects (Math, String, Date) Regular Expressions, DOM Event Handling	12	30
3.	<b>Angular JS:</b>  Single page application: Single page application using AngularJS, Create a module, Define Simple controller Embedding AngularJS script in HTML , AngularJS's routine capability , \$routeProvider service from ngRoute, Navigating different pages\,HTML DOM directives, ng-disabled, ng-show, ng-hide, ng-click, Modules (Application, Controller) , Forms (Events, Data validation, ng-click)	8	10
	<b>Introduction to PHP</b>  <b>Introduction:</b> Basic HTML syntax, Basic PHP Syntax, using SFTP, Testing your script, Sending text to browser, Using the PHP Manual, Sending HTML to the browser, Adding comments to Scripts, Basic debugging steps		



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4.	<p><b>Variables:</b> What Are Variables?, Variable Syntax, Types of Variables, Variable Values, Understanding Quotation Marks</p> <p><b>Form:</b> Creating a Simple Form, Choosing a Form Method, Receiving Form Data in PHP, Displaying Errors, Error Reporting, Manually Sending Data to a Page</p> <p><b>Numbers:</b> Creating the Form, Performing Arithmetic, Formatting Numbers, Understanding Precedence, Incrementing and Decrementing a Number, Creating Random Numbers</p> <p><b>Strings:</b> Creating the HTML Form, Concatenating Strings, Handling Newlines, HTML and PHP, Encoding and Decoding Strings, Finding Substrings, Replacing Parts of a String</p> <p><b>Control Structures:</b> Creating the HTML Form, The if Conditional, Validation Functions, Using else, More Operators, Using elseif The Switch Conditional, The for Loop</p>	6	15
5.	<p><b>Introduction to LARAVEL:</b> Why Use a Framework? Why Laravel? Setting Up a Laravel Development Environment, An Introduction to Artisan, Basic Artisan commands, Writing custom artisan commands, calling artisan commands in Normal code, Tinker.</p> <p><b>Router and Controllers:</b> Route Definitions, Route Groups, Views, Controllers, Route Model Binding, Route Caching, Form Method Spoofing, CSRF Protection, Redirects, Aborting the Request, Custom Responses</p> <p><b>Blade Template :</b> Echoing Data, Control Structures ( Conditionals, Loops, Or), Template Inheritance, View Composers and Service Injection, Custom Blade Directives Front</p> <p><b>End Components:</b> Elixir, Pagination, Message Bags, String Helpers, Pluralization and localization</p> <p><b>Collecting and Validating User Data:</b> Injecting a Request Object, Route Data, Uploaded Files, Validation, Form Requests, Eloquent Model Mass Assignment, {{ versus !! Auth Controller</p> <p><b>Eloquent:</b> configuration, Migration, Seeding, Query Builder, Introduction to Eloquent, Eloquent Events User</p> <p><b>Authentication and Authorization :</b> The User Model and Migration, Using the auth() Global Helper and the Auth Facade</p>	13	30
	<b>Total</b>	<b>45</b>	<b>100</b>



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## References/Suggested Learning Resources:

### Textbook:

1. M. Srinivasan, Web Technology: Theory and Practice, Pearson India
2. Ivan Bayross, Web Enabled Commercial Application Development Using HTML, JavaScript, DHTML and PHP - BPB Publications
3. Jeremy McPeak, Paul Wilton, Beginning JavaScript Wrox Publication
4. Angular From Theory To Practice, Asim Hussain, Version 1.2.0, 2017-11-24
5. Larry Ullman, PHP for Web, fifth Edition, Pearson
6. Matt Stauffer, "LARAVEL Up and Running, A framework for building modern PHP Apps", O'REILLY , 3rd Indian Reprint (ISBN: 978-93-5213-485-4)

### Reference Books:

1. Murach's HTML5 & CSS3", Zak Ruvalcaba & Anne Boehm
2. "JavaScript: The Definitive Guide", 6th Edition, David Flanagan, O'Reilly Media
3. "Learning Web Design: A Beginner's Guide to HTML, CSS, JavaScript, & Web Graphics", Jennifer Niederst Robbins, O'Reilly
4. "HTML5 Programming with JavaScript", John Paul Mueller, Wiley
5. "HTML5 & CSS3 for the Real World", Estelle Weyl, Louis Lazaris, Alexis Goldstein, Sitepoint
6. Julie C Meloni, "Sams Teach Yourself PHP, MySQL and Apache All in One" 4th edition, Pearson Education
7. Luke Welling, Laura Thomson , PHP and MySQL Web Development — Pearson
8. Mastering Web Application Development with AngularJS, Pawel Kozlowski Peter and Bacon Darwin, Packt Publishing
9. Martin Bean, "Laravel 5 Essentials", Packt Publishing, ISBN 978-1-78528-301-7
10. Fernando Monteiro, "Hands-On Full-Stack Web Development with Angular 6 and Laravel 5 ", Packt Publishing, ISBN 9781788833912

### Suggested Course Practical List:

1. HTML Basics: Create a simple HTML document with headings, paragraphs, lists, links, images, and tables.
2. HTML Forms: Design a form with various input types and validate it using HTML5 attributes.
3. CSS Styling: Apply CSS to an HTML document to style text, borders, backgrounds, and layouts using the Box Model.
4. Responsive Design: Create a responsive webpage using CSS media queries.
5. JavaScript Basics: Write a JavaScript script to perform basic arithmetic operations and manipulate the DOM.
6. JavaScript Events: Implement event handling to create interactive elements on a webpage.



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7. Form Validation: Create a JavaScript-based form validation system.
8. AngularJS Application: Develop a single-page application (SPA) using AngularJS that includes a module, controller, and view.
9. AngularJS Directives: Use AngularJS directives such as ng-show, ng-hide, and ng-click in a sample application.
10. PHP Basics: Write a simple PHP script to process form data and display it on a webpage.
11. PHP Control Structures: Create a PHP script that uses if-else and switch-case statements for decision-making.
12. Database Connection with PHP: Connect a PHP script to a MySQL database and perform CRUD operations.
13. Laravel Setup: Set up a Laravel development environment and create a simple application using Artisan commands.
14. Laravel Routing and Controllers: Define routes and create controllers in a Laravel application.
15. Laravel Blade Templates: Develop a Laravel application using Blade templates to display dynamic content.

## CO- PO Mapping:

Semester	Course Name : Web Technology Project							
	POs							
Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	2	2	-	-	-	-	-
CO2	3	3	3	-	-	-	-	1
CO3	3	3	3	2	-	-	-	-
CO4	3	3	3	2	-	-	-	-
CO5	1	3	3	3	-	-	-	1
	<b>2.6</b>	<b>2.8</b>	<b>2.8</b>	<b>2.3</b>	-	-	-	<b>1</b>

Legend: '3' for high, '2' for medium, '1' for low and '-' for no correlation of each CO with PO.

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