23MCAJ202	WEB APPLICATION DEVELOPMENT	L	T	P	J	S	C	Year of Introduction
		2		2	2	5	5	2023

Preamble: Encourage the students to explore the designing of web applications by implementing the relevant and recent techniques. This course challenges the students to exercise their creativity by applying the theoretical concepts.

Prerequisite: Basic understanding of computer programming, Internet and Database etc. is very helpful.

Course Outcomes: After the completion of the course the student will be able to

CO1	To understand the concepts of the World Wide Web.
CO2	Apply HTML and CSS effectively to create interactive websites.
CO3	Implement client-side scripting using JavaScript to design dynamic websites.
CO4	Implement server-side scripting using PHP.
CO5	Design PHP application with Database connectivity.

CO - PO MAPPING

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	3	2	2		3	3				
CO2	3	3	3	2	2		3	3	1			
CO3	3	3	3	2	2		3	3	1			
CO4	3	3	3	2	2		3	3	1			2
CO5	3	3	3	3	3		3	3	1		2	2

Assessment Pattern for Theory component

Bloom'sCategory	Continuous Assessment Tools			End Semester Examination
	Test1	Test2	Other tools	
Remember	✔	✔	✔	✔
Understand	✔	✔	✔	✔
Apply	✔	✔	✔	✔
Analyse			✔	
Evaluate			✔	
Create			✔	

Assessment Pattern for Lab component

Bloom'sCategory	Continuous Assessment Tools	
	Class work	Test1
Remember		
Understand	✔	✔
Apply	✔	✔
Analyse	✔	✔
Evaluate	✔	
Create	✔	

Assessment Pattern for Project component			
Bloom's Category	**Continuous Assessment Tools**		
	Evaluation 1	**Evaluation 2**	**Report**
Remember			
Understand	✔	✔	
Apply	✔	✔	
Analyse	✔	✔	
Evaluate		✔	
Create		✔	
Mark Distribution of CIA			

Course Structure [L-T-P-J]	Attendance	Theory [L- T]		Practical [P]	Project [J]			Total Marks
		Assignment	**Test-1**	**Class work**	**Evaluation 1**	**Evaluation-2**	**Report**	
	5	15	10	10	5	10	5	**60**

Total Marks distribution			
Total Marks	**CIA (Marks)**	**ESE (Marks)**	**ESE Duration**
100	60	40	2.5 HRS

End Semester Examination [ESE]: Pattern

PATTERN	PART A	PART B	ESE Marks
PATTERN		2 questions will be given from each module, out of which 1 question should be answered. Each question can have a maximum of 2 sub divisions. Each question carries 8 marks. Marks: (5x 8 = 40 marks) Time: 2.5 hours	40
	Total Marks: 0	Total Marks: [5x8 = 40 marks]	

SYLLABUS
MODULE I: Introduction To Web
Client/Server concepts, Overview of HTTP - HTTP request – response, Generation of dynamic web pages, Application Servers, Web Security.
MODULE II: Basic HTML and CSS
Basic HTML page, Text Formatting, Table, Headers, Linking, Images, List, Meta Elements, Cascading Style Sheets: Inline, Internal and External Style Sheet
MODULE III : Client Side Scripting using JavaScript
Core features, Data types and Variables, Operators -Expressions and Statements, Functions, Objects, Array, String, Event Handling, Form handling and validations
MODULE IV : Introduction to PHP
Numbers and Strings, Literals and Variables, Operators and Functions, arrays. Creating Form Controls, Using Values Returned From, Forms Using PHP - User Authentication: Creating Session, Authorization Level.
MODULE V :Connecting to MySQL
Connecting to MySQL Server, Selecting Databases, Checking for Errors, Closing the MySQL Server Connection, Inserting, Viewing, Updating and Deleting Records, Manipulating joined tables.
Text books Paul Deitel, Harvey Deitel, Abbey Deitel, Internet & World Wide Web - How to Program, 2020 6th edition, Pearson Education.
Reference books Fritz Schneider, Thomas Powell, JavaScript – The Complete Reference, 2017, 3 Edition, McGraw Hill. Steven Holzener, PHP – The Complete Reference,2017, 1st Edition, Mc-Graw Hill David Flanagan, "JavaScript: The Definitive Guide", 6th Edition", O'Reilly Media

No.	COURSE CONTENTS AND LECTURE SCHEDULE	No. ofHours
	MODULE 1	
1.1	Introduction To Web: Client/Server concepts	1 hrs
1.2	Overview of HTTP - HTTP request – response	1 hrs
1.3	Generation of dynamic web pages	1 hrs
1.4	Application Servers, Web Security.	1 hrs
	MODULE II	
2.1	Basic HTML page, Text Formatting	1 hrs
2.2	Table, Headers, Linking	1 hrs
2.3	Images, List, Meta Elements	1 hrs
2.4	Cascading Style Sheets: Inline, Internal and External Style Sheet	2 hrs
	MODULEIII	
3.1	Client Side Scripting using JavaScript: Core features, Data types and Variables, Operators	1 hrs
3.2	Expressions and Statements, Functions	1 hrs
3.3	Objects, Array, String	1 hrs
3.4	Event Handling	1 hrs
3.5	Form handling and validations	1 hrs
	MODULEIV	
4.1	Introduction to PHP, Numbers and Strings	1 hrs
4.2	Literals and Variables	1 hrs
4.3	Operators and Functions, arrays	1 hrs
4.4	Creating Form Controls, Using Values Returned From.	1 hrs
4.5	Forms Using PHP - User Authentication: Creating Session, Authorization Level.	1 hrs

MODULEV		
5.1	Connecting to MySQL Server, Selecting Databases.	2 hrs
5.2	Checking for Errors, Closing the MySQL Server Connection.	1 hrs
5.3	Inserting, Viewing.	1 hrs
5.5	Updating and Deleting Records, Manipulating joined tables.	1 hrs

LESSON PLAN FOR LAB COMPONENT

No.	Topic	No. of Hours	Experiment
1	HTML	4	Create a HTML file to link to different HTML page which contains images, tables, and also link within a page. Create a HTML page with different types of frames such as floating frame, navigation frame & mixed frame. Read a matrix from the console and check whether it is symmetric or not
2	CSS,HTML	5	Create a HTML file by applying the different styles using inline, external & internal style sheets Create a registration form using HTML
3	Javascript	5	Create a HTML registration form and to validate the form using JavaScript code Create a HTML page to change the background color for every click of a button using JavaScript Event Handling. Create a HTML page to display a new image and text when the mouse comes over the existing content in the page using JavaScript Event Handling
4	PHP	5	Develop a registration form using PHP and do necessary validations Build a PHP code to store name of students in an array and display it using print_r function. Sort and Display the same using asort & arsort functions. Build a PHP code to store name of Indian Cricket players in an array and display the same in

			HTML table Develop a PHP program to connect to a database and retrieve data from a table and show the details in a neat format.
5	Database Connectivity	5	Using PHP and MySQL, develop a program to accept book information viz. Accession number, title, authors, edition and publisher from a web page and store the information in a database and to search for a book with the title specified by the user and to display the search results with proper headings
6	Students must develop an application that carries all the above concepts	24	Sample: Develop a web application for Airline Reservation System using any PHP framework .(use any latest framework)

	CO Assessment Questions
1	Explain the need of Application server in developing an application.
	Explain about HTTP request /response in the development of an application.
2	Differentiate various cascading styling sheets .
	Explain about the HTML pages with different types of frames.
3	List out the different ways an HTML element can be accessed in a JavaScript code
	Create a HTML registration form and to validate the form using JavaScript code
4	Explain the following with suitable example code 1) Echo vs Print 2) Super variable 3) Super global operator 4) Literals Explain the way to declare the array in PHP using suitable code.
5	Explain CRUD Operations in detail.