



Gyanmanjari
Innovative University

Course Syllabus
Gyanmanjari Institute of Technology
Semester-4 (B.Tech.)

Subject: Fundamental of Web Development-BETCE14308

Type of course: Minor

Prerequisite: Basic Knowledge of HTML, CSS and Javascript

Rationale:

In the era of digitization, the demand for Internet-based applications is surging, driving the need for skilled developer's adept in both front-end and back-end design. This comprehensive course aims to immerse students in the intricacies of web development, empowering them to navigate the dynamic landscape of the Internet-driven world with confidence. By focusing on both front-end and back-end design principles, learners will gain a holistic understanding of the development process, from creating visually engaging user interfaces to implementing robust server-side functionalities.

Teaching and Examination Scheme:

Teaching Scheme			Credits	Examination Marks					Total Marks
CI	T	P	C	Theory Marks		Practical Marks		CA	
				ESE	MSE	V	P	ALA	
3	0	2	4	60	30	10	20	30	150

Legends: CI-Class Room Instructions; T – Tutorial; P - Practical; C – Credit; ESE - End Semester Examination; MSE- Mid Semester Examination; V – Viva; CA - Continuous Assessment; ALA- Active Learning Activities.

Course Content:

Sr. No	Course content	Hrs.	Weightage %
1	Introduction Fundamental of webpage, website and apache server, Introduction of PHP, Features, Advantages and Limitations, Data Type, Variable, Constant, PHP Structure and Syntax, Configuration of PHP, Apache Web Server, MySQL and Open Source, Relationship between Apache, MySQL and PHP (AMP Module)	6	13%



2	Basic of PHP Conditional Statement, Looping Statement, Array- Types of Arrays (Numeric, Associative, Multidimensional), PHP Server variables , Built-in-functions: String Function print,echo,chr,trim,ltrim,rtrim,soundex,str_word_count,strencp,stri str, strstr,strlen,strpos,strrev,substr,strtoupper,strtolower,ucfirst,ucwor d, substr_replace Mathematical Function abs,sqrt,log,floor,ceil,pow, max,min Date/Time Function Date,time,getdate,gettimeofday, localtime,checkdat Array Function Count, list, in_array, current, next, previous, end, each, sort, array_merge, array_reverse File function Fopen, fread, fwrite, fclose	15	33%
3	Working with form Form elements- TextBox, TextArea, Password,RadioButton, Check Box, Combo Box, Image, Buttons – Submit and Reset, Uploading File to web server , POST & GET method ,PHP include and require statement Submitting form values, using \$_Get and \$_Post Methods, \$_REQUEST, Accessing form inputs with Get/Post functions, Combining HTML and PHP codes together on single page, Redirecting the user	10	22%
4	Session, Cookies and Error Handling Setting a cookie with PHP, Deleting a cookie, Creating session cookie Working with the query string Creating query string, Session, Starting and Destroying session, Working with session variables , Passing session IDs, Error Types in PHP,Exception Handling in PHP, Error Handling- Try, Catch and Throw block, die() function	06	13%
5	Database Connectivity PHP-MySQL architecture , Database interaction --Creating and connecting database, Executing commands- Selecting, Inserting, Updating, Deleting , Small application development Page redirection in PHP	08	19%



Continuous Assessment:

Sr. No	Active Learning Activities	Marks
1	Interactive PHP Quiz Application Students will work in groups to create a simple quiz application using PHP, incorporating conditional statements, loops, and arrays. The application will include a form for multiple-choice questions, logic to check answers, and a scoring system. Each group will present their application, demonstrating their implementation of PHP form handling and feedback mechanisms.	10
2	PHP File Upload and Image Gallery In this project, students will develop an image upload application that allows users to upload images with various validations and view them in a gallery. They will create a form with various elements, handle file uploads using PHP file functions, and manage sessions to track uploads. Each group will present their gallery, discussing the file handling and session management techniques they employed.	10
3	Mini Project Students will work individually or in groups to create a dynamic Mini website using PHP and MySQL. The project will include features such as adding, updating, and deleting tasks, with data persistence ensured through a database. Students will apply PHP CRUD operations, form handling, and session management. The final output will be upload in GMIU Portal.	10

Suggested Specification table with Marks (Theory):60

Distribution of Theory Marks						
(Revised Bloom's Taxonomy)						
Level	Remembrance (R)	Understanding (U)	Application (A)	Analyze (N)	Evaluate (E)	Create (C)
Weightage	20%	30%	30%	10%	-	10%



Course Outcome:

After learning the course, the students should be able to:	
CO1	Understand PHP syntax, structure, and fundamental concepts.
CO2	Utilize arrays and built-in functions efficiently for data manipulation.
CO3	Implement form handling techniques for user input processing.
CO4	Manage user sessions and cookies for enhanced web functionality.
CO5	Develop dynamic web applications with database integration and CRUD operations.

List of Practical

Sr. No	Descriptions	Unit No	Hrs.
1	Write a PHP script to Enter number and check number is prime or not.	2	1
2	Write a PHP script to enter 2 numbers and print armstrong number of given range.	2	1
3	Write PHP Script to print Fibonacci series.	2	1
4	Write PHP Script for addition of two 2x2 matrices.	2	1
5	Write PHP script to obtain 5! Using function.	2	1
6	Write PHP script to cover all string function, math functions.	2	2
7	Write PHP script to cover all Date and Time function, array functions File function.	2	2
8	Create student registration form using text box, check box, radio button, select, submit button And display user inserted value in new PHP page.	2	2
9	Create a form with a password input field. On submission, display if the password length is valid.	3	1
10	Create a form with radio buttons for selecting gender, textbox input to accept a user's name, textarea for user feedback,, then display the entered data using the \$_POST method.	3	1
11	Create a form with a password input field. On submission, display if the password length is valid.	3	1
12	Create a form with a submit button that saves entered data (like name and email, hobby, gender, city, languages known) and displays it on the same page.	3	2
13	Create a file upload form where users can upload any file type. Display the file name, type, and size on upload. And store image in specific folder.	3	1
14	Create a form to collect user information (name, age, email) using the GET & Post method, then display the data.	3	2
15	Write a PHP script to set a cookie with the user's name and expiration time of 1 hour. Display the cookie value on the page.	4	1



16	Write a PHP script to start a session and store the user's name in a session variable, then display the stored value. And after destroy session and remove all store information	4	1
17	Create a PHP script that explicitly passes the session ID in a URL to maintain session state across pages.	4	1
18	Write a PHP script to create a custom exception if a number is negative, using throw within try-catch blocks.	4	1
19	Write a program to read customer information like cust_no, cust_name, Item_purchase, and mob_no, from customer table and display all these information in table format on output screen.	5	2
20	Create a PHP script to create a table (e.g., users table with fields id, name, and email) in the MySQL database. And store data in table dynamic use HTML tag to take input and store data in database	5	2
21	Develop a small registration form application using PHP and MySQL where users can register with their name, email, and password. Save the data to the database and display a success message and also do all CRUD operation.	5	2
22	Create a login form that checks user credentials (email and password) against records in the database, authenticating the user if correct.	5	1
Total		30	

Instructional Method:

The course delivery method will depend upon the requirement of content and need of students. The teacher in addition to conventional teaching method by black board, may also use any of tools such as demonstration, role play, Quiz, brainstorming, MOOCs etc.

Students will use supplementary resources such as online videos, NPTEL/SWAYAM videos, e-courses, Virtual Laboratory

The internal evaluation will be done on the basis of Active Learning Assignment

Practical/Viva examination will be conducted at the end of semester for evaluation of performance of students in laboratory.

Reference Books:

- [1] Web Technology: A Developer's Perspective By N.P.Gopalan, J. Akilandeswari, PHI Learning
- [2] Developing Web Application by Ralph Moseley, Wiley India.
- [3] HTML5 Black Book, Dreamtech Press.
- [4] A Step-by-Step Guide to Creating Dynamic Websites by Robin Nixon Publisher: O'Reilly Media.

