

GUJARAT TECHNOLOGICAL UNIVERSITY, AHMEDABAD, GUJARAT

**COURSE CURRICULUM
COURSE TITLE: DYNAMIC WEB PAGE DEVELOPMENT
(COURSE CODE:3350702)**

Diploma Programmes in which this course is offered	Semester in which offered
Computer Engineering	5 th Semester

1. RATIONALE

PHP is a powerful tool for making dynamic and interactive Web pages. PHP is the widely-used as efficient open source technology alternative to competitors. The goal of the language is to allow web developers to write dynamically generated pages quickly." This course covers basic concepts for developing interactive web based applications; including HTML, client side scripting, server side scripting, user interface design considerations, and system integration considerations. Students will learn html, css, javascript, and be introduced to php. Hence students will gain the experience in designing and implementing working prototypes of web pages, web sites, and interactive dynamic web-based applications which also be useful in forthcoming web development subject and also be employed small scale industry of basic web page development.

2. COMPETENCY

The course content should be taught and implemented with the aim to develop different types of skills so that students are able to acquire following competency:

- Develop interactive web based application using HTML, CSS, Javascript, PHP and MYSQL

3. Course Outcomes:

- Design and develop a Web page using HTML and CSS.
- Style your page using CSS, internal style sheets, and external style sheets.
- Apply client side scripting using javascript
- Develop Web page using different form elements and apply error handling concept of PHP.
- Design and develop a Web site using text, images, links, lists, and tables for navigation and layout
- Create Website using MYSQL database.

4. Teaching and Examination Scheme

Teaching Scheme (In Hours)			Total Credits (L+T+P)	Examination Scheme				Total Marks
				Theory Marks		Practical Marks		
L	T	P	C	ESE	PA	ESE	PA	200
3	0	4	7	70	30	40	60	

Legends: L-Lecture; T – Tutorial/Teacher Guided Theory Practice; P - Practical; C – Credit ESE - End Semester Examination; PA - Progressive Assessment.

5. COURSE DETAILS

Unit	Major Learning Outcomes	Topics and Sub-topics
Unit 1 : Introduction to html & CSS	1a. Design and develop basic web pages using HTML and CSS.	1.1 The history of the web 1.2 Introduction to protocol/domain name (www,http,smtp,Discuss of Domain like.com,.org,.gov,.edu) 1.3 Introduction to Layout/ types of Layout 1.4 (Static, Dynamic,Use of px,%,em in Webpage)
	1b. Use of basic HTML Tags.	1.5 History of Html the language of Web 1.6 Basic Html Tags (<html>,<head>,<title>,<body>,<hr>,,<embed>,<bgsound>,<blink>,,<center>,<marquee>,<a>) 1.7 Coding style ,syntax, Working with Image, Linking a webpage (,,) 1.8 Table & Form Creation Definition List (<dl>,<dt>,<dd>) 1.9 Division Tags, IDs & Classes 1.10 Special Character or tags
	1c. Use of advance HTML 5 Tags.	1.11 Difference between Html 4.0 & 5.0 1.12 Brief Discuss Html 5 tags with Ex. (<header>,<aside>,<section>,<footer>,<article>,<nav>) 1.13 Introduction to Html5 Form Input Type ,Elements & Attributes. 1.14 Form Input Type (color, Date, Datetime, Datetime-local, email, month number, range, search, tel, time, url, Week) 1.15 Form Input Type Elements(Datalist, Keygen, output) 1.16 Html5 video & audio(<Audio>,<Video>) 1.17 Static Webpage Design using Html5 tags

Unit	Major Learning Outcomes	Topics and Sub-topics
	1d. Design and develop web pages using CSS/ CSS 3 styles, internal and/or external style sheets.	1.18 Introduction to Css/dhtml 1.19 Briefly Discuss to stylesheet (What is Css? ,Use of Css, Type's of Css, Syntax) 1.20 Css margin, padding , Text, Font Properties 1.21 Css and links 1.22 Css Background, Border Properties, Height, width, Css Positioning, Layout creating 1.23 Css and backgrounds, Css and borders, Float Properties, Css video, audio Tag, Map Creating 1.24 Diff. between Css2 & Css3 1.25 Css3- Opacity, Box-Shadow, Border- radius, Gradient, Transition, Transform , Animation , Keyframes
Unit – II Introduction to JavaScript , Event & Form Validation	2a.Explain the origins and uses of JavaScript	2.1 Introduction to javascript
	2b.Describe the basic concepts of object-based programming and how they apply to JavaScript	2.2 Way to Write Scripting in JavaScript 2.3 Basic display and objects (MATH, DOCUMENT, DATE, HISTORY, WINDOW) 2.4 Briefly discuss on Popup Windows (Alert, Prompt, Confirm) 2.5 Instruction to objects, Properties, methods variables (what is variables , Syntax, Var Keyword)
	2c.Describing how arrays are stored in Array objects 2d.Declaring, allocating, and sorting arrays	2.6 Array (What is array, Syntax, Type of Array , Examples)
	2e. Create and use primitive data types, operators, variables, and expressions	2.7 Data types, Operators & Expression
	2f. Create selection statements using “if”, “if...else”, and “switch” 2g. Create repetition statements and counters using “for”, “do”, and “while”	2.8 Condition, Statements, blocks

Unit	Major Learning Outcomes	Topics and Sub-topics
	2h. Use different events for validating input	2.9 Introduction to Events 2.10 List of Events (onload, onunload, onchange, onmouseover, onmouseout, onmousedown, onmouseup, onclick) 2.11 Introduction to Form Validation 2.12 Input type Validation 2.13 Validating before submission
Unit – III Basics of PHP	3a. Define PHP	3.1 What is PHP? 3.2 A Brief History of PHP 3.3 What does PHP do?
	3b. Install & test web server	3.4 Installing PHP for (Windows, Wamp server, linux, Lampserver, XXAMP server) 3.5 Configuring Apache to use PHP 3.6 Testing the PHP Installation
	3c. Understand and be familiar with PHP variables, data types and operators used.	3.7 What's a Variable? 3.8 PHP Variable and value types 3.9 What's An Operator? PHP Operator (Arithmetic, Logical, Bitwise, Assignment, String, Inc/Decrement, Compression)
	3d. Apply the syntax of control structures	3.10 Conditional Statement, Looping Statement (SIMPLE IF, IF...ELSE, NESTED...IF, ELSE IF...LADER, SWITCH, FOR LOOP, WHILE, DO...WHILE, FOR EACH) 3.11 PHP start and end tags 3.12 Commenting your code (Single line, Multi line)
	3e. Describe different types of array	3.13 Array, Types of Array 3.14 Submitting your form and getting Result
Unit – IV Displaying Dynamic Content, Working With Data	4a. Use different type of functions	4.1 Working with Function (Variable Function, String Function, Math function, Date Function, Array Function, File Function, Image Function)
	4b. Create an input form	4.2 Creating An Input Form
	4c. Differentiate PHP superglobals method	4.3 PHP Superglobals Method (\$_GET, \$_POST, \$_REQUEST) 4.4 Getting Variable from Form 4.5 Submitting your Forms And getting Result 4.6 Creating a redirection Form

Unit	Major Learning Outcomes	Topics and Sub-topics
	4d. Describe cookies Create and manage session	4.7 Using Cookies and maintaining Session 4.8 Using Cookie Variable 4.9 Using Cookies with Authentication 4.10 What's A Session? 4.11 Understanding Session Variable 4.12 Starting a session 4.13 Registering and modifying Session Variable 4.14 Managing user preferences with session
	4d. Send Email using SMTP server	4.15 Sending Email using SMTP server
	4e. Create feedback form with a custom error message	4.16 The Simple Feedback Form 4.17 Creating the Feedback Form 4.18 Creating A Script to mail your Form 4.19 A feedback form with a custom Error messages
	4f. Upload a file using form and script	4.20 Creating the upload script 4.21 Uploading a File using your form and script
Unit – V Establishing a Connection, Working With Database	5a. Concept of database in php	5.1 What is Database? 5.2 Introduction to MYSQL 5.3 Creating Database using phpmyadmin & Console(using query, using Wamp server)
	5b. Establish a connection with database & Manipulate tables with constraints	5.4 How to Connect with PHP/ Database Connection 5.5 Creating Table using phpmyadmin & Console(using query, using Wamp server) 5.6 SQL Queries (INSERT, CREATE, UPDATE, DELETE, SELECT) 5.7 Constraints (Creating a Table with Primary Key, Foreign Key, CHECK Constraint, Unique Constraint)
	5c. Host a Website using 'C' panel and Filezilla software	5.8 Hosting Website (Using 'C' panel, Using Filezilla Software) 5.9 Final Working on mini PHP Project with Example.

6. SUGGESTED SPECIFICATION TABLE WITH HOURS & MARKS (THEORY)

Unit No.	Unit Title	Teaching Hours	Distribution of Theory Marks			
			R Level	U Level	A Level	Total Marks
I	Introduction to html & CSS	8	3	3	0	06
II	Introduction to JavaScript , Event & Form Validation	8	5	5	0	10
III	Basics of PHP	6	4	4	6	14
IV	Displaying Dynamic Content, Working With Data	10	6	6	8	20
V	Establishing a Connection, Working With Database	10	6	5	9	20
	Total	42	24	23	23	70

Legends: R = Remembrance; U = Understanding; A = Application and above levels (Revised Bloom's taxonomy)

Note: This specification table shall be treated as a general guideline for students and teachers. The actual distribution of marks in the question paper may vary slightly from above table.

7. SUGGESTED LIST OF EXERCISES/PRACTICALS

The practical/exercises should be properly designed and implemented with an attempt to develop different types of cognitive and practical skills (**Outcomes in cognitive, psychomotor and affective domain**) so that students are able to acquire the competencies. Following is the list of practical exercises for guidance.

Note: Here only outcomes in psychomotor domain are listed as practical/exercises. However, if these practical/exercises are completed appropriately, they would also lead to development of Programme Outcomes/Course Outcomes in affective domain as given in a common list at the beginning of curriculum document for this programme. Faculty should refer to that common list and should ensure that students also acquire those Programme Outcomes/Course Outcomes related to affective domain

S. No.	Unit No.	Practical Exercises (Outcomes' in Psychomotor Domain)	Hrs. required
1	I	Write a Simple HTML code & also write code to attach video on webpage using embed tag in html	02
2	I	Write a code for attach image and linking.	02
3	I	Create A Feedback Form Using Form handling.	01
4	I	Create a contact form using form handling.	01
5	I	Write a code for creating static page design using division tag	02
6	I	Write a code for design menu system using list tag	02
7	I	Design Google Page using HTML5	02
8	II	Write a program to print a message using javascript	01
9	II	Write a script for form field validation using javascript	01

10	II	Write a script to display current date, month, year using javascript	01
11	II	Give an example of alert ,confirm ,prompt box using javascript	01
12	II	Write a code for check no is odd/even using JavaScript	02
13	III	Write a PHP script to display Welcome message. Write a PHP script to demonstrate arithmetic operators, comparison operator, and logical operator.	02
14	III	Write a PHP script to get type of variable using gettype() Write a PHP script to set type of variable using settype()	02
15	III	Write a PHP script to set type of variable using type casting	02
16	III	Write PHP Script to print Fibonacci series. Write PHP Script to generate result and display grade. Write PHP Script to find maximum number out of three given numbers.	02
17	III	Write PHP Script using two dimensional arrays such as addition of two 2x2 matrices. Write PHP Script for FOR EACH loop execution.	02
18	IV	Write PHP script Using user defined function Write PHP script to demonstrate string function.	02
19	IV	Write PHP script to display date formats using date functions. Write PHP script to demonstrate Math functions.	02
20	IV	Create login page. Create using text box, check box, radio button, select, submit button. And display user inserted value in new PHP page (e.g. student registration/inventory/library form).	02
21	IV	Write two different PHP script to demonstrate passing variables through a URL Write two different PHP script to demonstrate passing variables through Hidden Variables.	04
22	IV	Write two different PHP script to demonstrate passing variables with sessions Write PHP script to demonstrate passing variables with cookies Write a program to keep track of how many times a visitor has loaded the page.	04
23	IV	Write a Program to upload image with extension gif or jpeg. Write a PHP script to create watermarks using Imagecopymerge . Write a PHP script to convert images to grayscale.	04
24	V	Write a PHP script to connect MYSQL server from your website. Write a PHP script to create database. Write a PHP script to drop database.	04

25	V	Write steps to create database using phpMyAdmin. Write a program to read input data, from table and display all these information in table format on output screen.	04
26	V	Write a program to manipulate data from table and display all this information using table format.	04
27	V	Develop small application	04
Total Hours			62

8. SUGGESTED LIST OF STUDENT ACTIVITIES

Following is the list of proposed student activities like:

- i Prepare power point presentation for relation between PHP APACHE and MYSQL.
- ii Prepare static webpage demonstration using HTML tags.
- iii Seminar on different css controls and java script controls.
- iv Prepare power point presentation for database concept and relation with PHP
- iv Develop and give presentation of mini website.

9. SPECIAL INSTRUCTIONAL STRATEGIES (if any)

Concepts will be introduced in lectures and by giving demonstration on projector.

Practical work will be through laboratory sessions. The course activities include:

Formal Lecture: 50% Supervised Laboratory Experiences: 50%

Group Discussion and seminar of live websites

10. SUGGESTED LEARNING RESOURCES

A) List of Books

S. No.	Title of Book	Author	Publication
1.	Learning PHP, MySQL, JavaScript, and CSS, 2nd Edition	Robin Nixon	O'Reilly Media
2.	Web Enabled Commercial Application Development Using HTML, JavaScript, DHTML and PHP, 4 th Edition 2010	Ivan Bayross	Paper Back ISBN : 9788183330084
3.	The Complete Reference	Steven Holzner	McGraw-Hill Osborne ISBN-13: 978-0071508544
4.	Head First PHP & MySQL	Lynn Beighley, Michael Morrison	o'reilly Media

B) List of Major Equipment/ Instrument with Broad Specifications

1. Computer System with latest configuration and memory
2. Multimedia Projector

C) List of Software/Learning Websites

Software : wamp server / xamp server, css, java script, 'C' Panel, Filezilla

- i. <http://www.html.net>
- ii. <http://www.cssbasics.com>
- iii. <http://www.tutorialpoint.com>
- iv. <http://www.homeandlearn.co.uk>
- v. <http://www.w3schools.com/PHP>

11. COURSE CURRICULUM DEVELOPMENT COMMITTEE**Faculty Members from Polytechnics**

- **Prof. P.P. Kotak, H.O.D. Computer Department, A V P T I, Rajkot**
- **Prof. R. M. Shaikh, H.O.D Computer Department, K. D. Polytechnic, Patan**
- **Prof. K. N. Raval, H.O.D Computer Department, R. C. Technical Institute, Ahmedabad**
- **Prof. R. M. Shah, H. O. D., Computer Department, GP, Ahmedabad.**
- **Prof. J. J. Karagthala Lecturer Computer Engineering Department, GGP**
- **Prof. R. K. Vaghela Lecturer Computer Engineering Department, RCTI**

Coordinator and Faculty Members from NITTTR Bhopal

- □ **Dr. M. A. Rizvi, Associate Professor, Dept. of Computer Engineering and Applications.**
- **Dr. R. K. Kapoor, Associate Professor, Dept. of Computer Engineering and Applications, NITTTR**