GUJARAT TECHNOLOGICAL UNIVERSITY

Syllabus for Integrated MCA 3rd Semester
Subject Name: Web Design Technology (WDT)
Subject Code: 2638604

With effective
from academic
year 2018-19

1. Learning Objectives:

- To understand the PHP Scripting language
- To understand how to Implement Web Application in PHP using MySQL.
- To understand cookie and session management in PHP.
- To understand how to design and develop dynamic web application using PHP, AJAX, jQuery and JSON

2. Prerequisites: HTML, CSS and Basics of MySQL

3. Contents:

Unit	Chapter Details	Weightage Percentage
Unit I	**Introduction to PHP** **Introduction:** 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 **Variables:** What Are Variables?, Variable Syntax, Types of Variables, Variable Values, Understanding Quotation Marks **Form:** Creating a Simple Form, Choosing a Form Method, Receiving Form Data in PHP, Displaying Errors, Error Reporting, Manually Sending Data to a Page	10%
Unit II	**Basics of PHP** **Numbers:** Creating the Form, Performing Arithmetic, Formatting Numbers, Understanding Precedence, Incrementing and Decrementing a Number, Creating Random Numbers **Strings:** Creating the HTML Form, Concatenating Strings, Handling Newlines, HTML and PHP, Encoding and Decoding Strings, Finding Substrings, Replacing Parts of a String **Control Structures:** Creating the HTML Form, The if Conditional, Validation Functions, Using else, More Operators, Using elseif The Switch Conditional, The for Loop	15%
Unit III	**Working with Arrays, Forms and Functions** **Using Arrays:** What Is an Array?, Creating an Array, Adding Items to an Array, Accessing Array Elements, Creating Multidimensional Arrays, Sorting Arrays, Transforming Between Strings and Arrays, Creating an Array from a Form **Creating Web Applications:** Creating Templates, Using External Files, Using Constants, Working with the Date and Time, Handling HTML, Forms with PHP, Revisited, Making Forms Sticky,	25%

	Sending Email, Output Buffering, Manipulating HTTP Headers **Creating Functions:** Creating and Using Simple Functions, Creating and Calling Functions that Take Arguments, Setting Default Argument Values, Creating and Using Functions that Return a Value, Understanding Variable Scope	
Unit IV	**Advanced PHP** **Cookies and Sessions:** What Are Cookies?, Creating Cookies, Reading from Cookies, Adding Parameters to a Cookie, Deleting a Cookie, What Are Sessions?, Creating a Session, Accessing Session Variables, Deleting a Session **Files and Directories**: File Permissions, Writing to Files, Locking Files, Reading from Files, Handling File Uploads, Navigating Directories, Creating Directories, Reading Files Incrementally	25%
Unit V	**jQuery Basics** Exploring Fundamentals of jQuery, loading and using jQuery, describing call back functions, exploring jQuery Selectors, methods,manipulators, events and effects, exploring jQuery and AJAX	25%

4. Text Book:

1) Larry Ullman, PHP for Web, fifth Edition, Pearson
2) Adam Freeman Pro jQuery 2.0, Apress

5. Reference Books:
1. Julie C Meloni, "Sams Teach Yourself PHP, MySQL and Apache All in One" 4th edition, Pearson Education
2. HTML5 Black Book: Covers CSS3, Javascript, XML, XHTML, Ajax, PHP and Jquery, by Kogent Learning Solutions Inc.
3. Tim Converse and Joyce Park, PHP6 and MySQL Bible –Steve Suehring, Wiley India Latest Edition.
4. Luke Welling, Laura Thomson , PHP and MySQL Web Development –– Pearson
5. Beginning Ajax with PHP From Novice to Professional, By Lee BabinApress
6. Head First AJAX by Rebecca Riordan , O'Reilly Media
7. Head First PHP& MySQL by Lynn Beighley, Michael Morrison, O'Reilly Media
8. Head First jQuery by Ryan Benedetti and Ronan Cranley, O'Reilly Media
9. Learning jQuery By Jonathon chaffer and Karl Swedberg, O'Reilly Media

Webliography:

a. http://www.codecademy.com/learn
b. http://www.w3schools.com
d. http://www.tutorialspoint.com/ajax/
e. http://www.tutorialspoint.com/jquery/
f. http://www.tutorialspoint.com/php

GUJARAT TECHNOLOGICAL UNIVERSITY

Syllabus for Integrated MCA 3rd Semester
Subject Name: Web Design Technology (WDT)
Subject Code: 2638604

Chapter wise Coverage from Main Reference Book(s):

Unit No.	Text Books	Topics/Subtopics
I	Book-1	Chapter : 1,2,3
II	Book-1	Chapter : 4,5,6
III	Book-1	Chapter : 7,8,10
IV	Book-1	Chapter : 9,11
V	Book-2	Chapter : 5, 9, 10, 14, 15

7. Accomplishments of the student after completing the course:

- Ability to install and configure MySQL, Apache and PHP.
- Ability to develop web based applications using PHP interacting with database.
- Ability to set & access cookies & session variables, Upload a file in PHP.
- Ability to validate forms using AJAX
- Ability to integrate AJAX and JQUERY in PHP.

8. Laboratory Exercises

1. Write a PHP program to display current date and time and display Good Morning / Good Afternoon / Good Evening message according to current time.

2. Create a web page for user profile and execute a PHP file on submission of the form and display the information using PHP.

3. Write a PHP Program to perform following operation on Array where values in array are entered by user
   a) Print the values of array.
   b) Reverse an array.
   c) merge two arrays in sorted manner.
   d) add values of all elements of an array.

4. Write a PHP function
   a. to print your name.
   b. to print the size of a string. Pass string as an argument
   c. to accept variable length arguments and display sum of all values and total number of arguments.

5. Write a PHP program to perform following string operations:
   a) print your name.
   b) print the size of a string. Pass string as an argument.
   c) concat two strings.
   d) convert case of string
   e) find one string from another.

6. Write a PHP program to find out maximum and minimum number.

GUJARAT TECHNOLOGICAL UNIVERSITY
Syllabus for Integrated MCA 3rd Semester
Subject Name: Web Design Technology (WDT)
Subject Code: 2638604

With effective
from academic
year 2018-19

7. Create an application to create a cookie, access a cookie and destroy the cookie.

8. Create an application that keeps track of how many times a visitor has loaded the page.

9. Set a session after user's login; maintain the user's data with session. Destroy the session and its data after a period of time.

10. Build an authentication application and restricts the unauthorized user from loading the page. And redirect the page with appropriate message
.
11. Write PHP code to store image in a database table.

12. Write PHP code to implement Querystring (passing variables using URL) concept.

13. Write PHP code to develop E-mail registration form and store all the submitted data in database table.

14. Write a program to read customer information like Cust_no, Cust_name, Item_purchased and Mob_no from Customer table and display all these information in table format on output screen.

15. Write a program to develop student registrationform and display all the submitted data on another page.

16. Write a program to read Employee informations like Emp_no, Emp_name, Designation and Salary from EMP table and display all these informations in table format on output screen. Provide option for editing and deleting a particular record from database.

17. Write PHP code to upload File/ image.

18. Write PHP code to download Data form Database into Excel, Word and PDF.

19. Develop an application which stores Railway's info with following fields Trainno, code,name, Type,Starting city, Destination city, Flag (W for weekly, D for Daily) Provide the following facilities like:
    a. Search by Starting city
    b. Search by Train Type
    c. List of train by Flag.

20. Write a program to calculate total weekly pay. If the user enters the number of hours worked and selects the hourly rate of pay from a list box. If overtime has been done, the number of hours is also entered. Over time hours are paid at double rate. A check box displays overtime. Calculate total amount to be paid.

21. Develop an application to add the movie name currently running with following operations:
    a. To see all the favorite movie
    b. To view top 5 and 10 movies

22. Create an application which displays the info about a particular institute which enables the user to see the faculty list according to department.

23. Write a PHP program to calculate interest for loan using user defined class 'loan calculator'.

24. Write a program for online merchants with following operations:
    a. Customer login for further transactions
    b. Validates the customer's information
    c. System should protect customer's information

25. Develop an application for a shopping cart with following operations:
    a. Manage and display the catalog
    b. Add, Update and delete the products
    c. Process the shipping info
    d. Stores the order info
    e. Display the summary

26. Display the most popular item to your customer which is purchased the most? If the item is in top 5 display the description to the customer.

27. Create a database application for social gathering containing
    a. Information about the location (eg: club house, Party venue)
    b. Facilities available in the venue
    c. Booking for the specific events
    d. Display the booking details for current month and also generate the report for the bill to be paid
    e. for a particular booking

28. Create a Webpage which will create CD album (read data from JSON file) and convert data into HTML table.

29. Create a Webpage which will read data from JSON file display data into HTML table (use AJAX).

30. Create a Registration form with validation using AJAX.

31. Create a form validation program using jquery

2) Desirable: List of Practical's: AJAX & jQUERY

1) Create a polling application (Survey) using AJAX and PHP.

2) Create a Suggestion application using AJAX and PHP