Department of Computer Science
Revised Syllabus of II Year Diploma Program (UG)

Title of Program: WEB Development

Syllabus Structure (UG)

Year	Semester	Course No.	Course Code	Contact Hours	Credits (1Credit=15 H)	Total Marks
2	III	CT III	DCST 303	30	2	75
		CL III	DCS L303	60	2	75
	IV	CT IV	DCST 404	30	2	75
		CL IV	DCS L404	60	2	75
	Annual	CP II	DCS P202	30	1	50
	Industrial and or Incubation and or Research and or Field Training			30	1	-
			Total	**240**	**10**	**350**

D: Diploma, *: Departmental Code (C: Chemistry, MI: Microbiology, CSE: Computer Science (Entire), etc)

C: Course, T: Theory, L: Lab (Practical), P: Project

Total No. of Courses: 6 (Theory: 02, Practical: 02, Project: 01)

 Theory and Practical: Semester, Project: Annual

Semester III

CT-III: D CST 303: Title: Basics of JavaScript
(Contact Hrs: 30 Credits: 2)

Learning Objectives:

Students will be able to

1. Understand the role of JavaScript in web page creation.
2. Learn JavaScript for use on a website.

Unit I: The Nature of JavaScript and Script Writing Basics **(15)**

The Evolution of Scripting Languages, JavaScript -Definition, Comparison between Java, JavaScript & VB Script. Introduction to Objects, Methods, and Events, Events ,String with methods and Program Flow, Jumping Right In, Running Scripts. Enhancing HTML Documents with JavaScript, the Quintessential Building Blocks, and Script Mechanics.

Unit II -Adding Interactivity to a WebPage **(15)**

Names and References in JavaScript , Built-in Objects, Home-Built Objects, The Hierarchy of Names, Using Methods, Operators and Variables, Keywords, Functions, Object interaction. Controlling Script Flow, Storing Tasks within Functions, Using Conditional Statements for Decision Making, if Statements, if-else Statements ,else-if statements, for ,for-In ,for-of Statements while statements, break and continue statements, Creating Functions in JavaScript, Declaring a Function, Designing a Simple Function.

Learning Outcomes:

After completion of the unit, Student is able to

1. Analyze the Knowledge in the basics of JavaScript and role in designing websites.
2. Understand the Knowledge about Script writing.

Reference Books:

1. The ABCs of JavaScript by Lee Purcell, Mary Jane Mara-BPB
   publications
2. Web Enabled Commercial Application Development Using Html,
   Dhtml, JavaScript , Perl CgiBy Ivan Bayross, BPB Publications, 2009.
3. Java Script Flamange, Bill Dudney, Johathanlehr, Bill Willies, Lery
   Mattingly "Mastering Java Server Faces" Wiely India 2006.
4. Head First Javascript programming by Elisabeth Robson, Eric T.Freeman

CL-III: DCS L303: Title (Practical): Lab Course on Basics of JavaScript
(Contact Hrs: 60 Credits: 02)

Learning Objectives:

Students will be able to,

1. Learn the how to define functions and methods in JavaScript.
2. Identify expressions and Operators.
3. Understand variable naming rules and JavaScript data types.
4. Analyze how to implement array and function in JavaScript.

List of Practical's (15)

1. Write a Javascript, which calculate sum or product depending on the drop down menu selection of two numbers, accepted using textbox and display the result in the third textbox. The action performs on click event on button.
2. Take 10 integer inputs from user and store them in an array. Again ask user to give a number. Now, tell user whether that number is present in array or not. (Iterate over array using while loop).
3. Write a function to calculate area and circumference of a circle.
4. Print the following patterns using loop :
   a.
   ```
   *
   **
   ***
   ****
   ```
5. Write a program to implement switch statement using JavaScript.
6. Write a javascript program to calculate area of triangle.
7. Write JavaScript program to create object using new keyword.
8. Write a program on keyboard event using JavaScript
9. Write a program to combine two strings using "+" addition operator.
10. Write a program to declare scope of variable local or global.
11. Write a program on Comparison Operators in JavaScript.
12. Write a javascript program to implement typeof operator.
13. Write a javascript program to calculate cube of given number.
14. Write a JavaScript function that accepts a string as a parameter and converts the first letter of each word of the string in upper case.
15. Write a JavaScript function that accepts a string as a parameter and counts the number of vowels within the string.

Learning Outcomes:

After completion of the unit, Student is able to

1. Understand how to handle web page events.

2. Describe and utilize concepts such as variables, arrays, conditionals, and loops.

3. Apply calculations on variables using operators.

4. Understand different events and apply it on various components.

Reference Books:

1. The ABCs of JavaScript by Lee Purcell, Mary Jane Mara-BPB publications
2. Web Enabled Commercial Application Development Using Html, Dhtml, JavaScript, Perl CgiBy Ivan Bayross, BPB Publications, 2009.
3. Java Script Flamange, Bill Dudney, Johathanlehr, Bill Willies, Lery Mattingly "Mastering Java Server Faces" Wiely India 2006.
4. Head First Javascript programming by Elisabeth Robson, Eric T.Freeman

Semester IV

CT-IV: D CST 404: Title: JavaScript Programming
(Contact Hrs: 30 Credits: 2)

Learning Objectives:

Students will be able to ,

1. To apply JavaScript into a web page using various approaches including inline code, internal scripts and external JavaScript files.
2. To create dynamic web pages using JavaScript.

Unit I- Creating Dynamic Webpage **(15)**

Changing Pages Based on Time and Date, Using the Date Object, Date properties and methods, Date Formats, Get and Set Methods, Displaying the Quote of the Day, Using Arrays, Array with methods, Sorting array ,Constructing the Quotes Script, Creating an Image Object, Creating an Area Object, Selecting a Guide.

Unit II- Java Scripting your Forms **(15)**

Basic Script Construction, Talking to Your Form Objects, Organizing Your Objects and Scripts, Regular Expressions ,Errors & Exceptions Handling ,Field-Level Validation, Check Required Fields ,Validate Zip Code, Math Object,Automated Formatting, Format Phone, Format Money, Automatic Calculation, Calculate Expiration Date, Calculate Amount, javascripted order form applications.

Learning Outcomes:

After completion of the unit, Student is able to

1. Create dynamic styles and dynamic web pages.
2. Apply validations on a web page.

Reference Books:

1. The ABCs of JavaScript by Lee Purcell, Mary Jane Mara-BPB publications
2. Web Enabled Commercial Application Development Using Html, Dhtml, JavaScript, Perl CgiBy Ivan Bayross, BPB Publications, 2009.
3. Java Script Flamange, Bill Dudney, Johathanlehr, Bill Willies, Lery Mattingly "Mastering Java Server Faces" Wiely India 2006.
4. Head First Javascript programming by Elisabeth Robson, Eric T.Freeman.

CL-IV:DCS L404: **Title (Practical): Lab Course on JavaScript Programming**

(Contact Hrs: 60 Credits: 02)

Learning Objectives:

Students will be able to

1. Understand how to design dynamic webpage.
2. Apply validations using required field.
3. Create image object using JavaScript.
4. Analyze the use calculation and validation in JavaScript.

List of Practical's (15)

1. Write a Java script that prompts the user for his or her name as the page load (via dialog box) and then welcome the user by name in the body of the page.
2. Create a dynamic webpage for student information using Javascript.
3. Write a program to display greeting message on screen according to time.
4. Create a dynamic website for E- greeting card.
5. Write a JavaScript function to get a textual representation of a day.
6. Write a JavaScript program to display date on webpage.
7. Apply JavaScript Validation for Name, Address, Email ID, Zip Code, Birth Date etc.
8. Write a JavaScript function that will return the number of minutes in hours and minutes.
9. Write a JavaScript program to remove duplicate items from an array.
10. Write a JavaScript function to get the number of days in a month.
11. Write a JavaScript program to display current date in different formats.
12. Write a JavaScript program to test the first character of a string is uppercase or not.
13. Create image object using JavaScript.
14. Create a Webpage and apply validation on it using alert().
15. Create a Product order webpage and calculate total amount.

Learning Outcomes:

After completion of the unit, Student is able to

1. Understand managing web page styles using JavaScript and CSS.
2. Apply validations on different components in webpage.
3. Create dynamic webpages using date and time.
4. Understand how to perform calculation on html components using javascript.

Reference Books:

1. The ABCs of JavaScript by Lee Purcell, Mary Jane Mara-BPB publications.
2. Web Enabled Commercial Application Development Using Html, Dhtml, JavaScript, Perl CgiBy Ivan Bayross, BPB Publications, 2009.
3. Java Script Flamange, Bill Dudney, Johathanlehr, Bill Willies, Lery Mattingly "Mastering Java Server Faces" Wiely India 2006.
4. Head First Javascript programming by Elisabeth Robson, Eric T.Freeman .

CP-II: D CSP202: Project
(Contact Hrs. 60, Credits: 2)

Every student should take up a project and submit in the report the work he/she has carried out. Project work will be accessed independently at the time of practical examination.

Industrial and or Incubation and or Research and or Field Training
(Contact Hrs. 60, Credits: 2)

Every student should submit in the report the work he/she has carried out about Industrial and or Incubation and or Research and or Field Training.

BOS Sub-Committee	Expert Committee
1. Ms. Pawar V. N. Chairman (Asst. Prof. YCIS, Satara)	1. Mr. Akshay Dilip Homkar Academic Expert (Assistant Professor, Dnyashree Institute of Engineering and Technology, Satara)
2. Ms. Mane A. V. Member (Asst. Prof. YCIS, Satara)	2. Mr. Asif Hamid Shaikh Industrial Expert (Software Engineer, Utopia automation and Control Pvt. Ltd., Satara)