

GUJARAT TECHNOLOGICAL UNIVERSITY

Integrated MCA

Year – 1 (Semester – I) (W.E.F. JULY 2018)

Subject Name: Fundamentals of Web (FoW)

Subject Code: 2618602

1. Learning Objectives:

- Students will learn about the opportunities, challenges and techniques for developing websites built with the new resources provided by HTML5, CSS and JavaScript.
- Students will learn about the evolving principles and standards for constructing accessible websites; will understand different classes of disabilities and the available techniques for rendering websites useful to those with disabilities

2. **Pre-requisites:** Working Knowledge of internet and HTML

3. Course Contents:

Sr. No.	CourseContent	Weightage Percentage
1	Introduction to Internet Evolution of teh internet and World wide Web, Web Basics(hyperlinks, URI,URL, Ports of a URL, Http headers, Http Get and Post requests), Multitier Application Architecture, Client-Side versus Server-side Scripting, Word Wide Web Consortium (W3C), Web 2.0	5%
2	HTML HTML Basics: Introduction, Editing HTML5, First HTML5 Example, W3C HTML validation service, Headings, Linking, Images Special Characters and Horizontal Rules, Lists, Tables, Forms, Internal Linking, meta Elements HTML5: New HTML5 input Types, input and data list ELeMents and auto complete Attributes, Page Structure ELeMents	25%
3	Cascading Style Sheets (CSS) CSS Basics: Introduction, inline Styles, Embedded Style Sheets, Conflicting sheets, Linking External Style Sheets, Positioning Elements, Backgrounds, Element Dimensions, Box Model and Text flow, Media Types and Media Queries, Drop-Down Menus, Optional: User Style Sheets CSS advance: Text Shadows, Rounded corners, Color, Box Shadows, Linear Gradients, Radial Gradients, Multiple background Images	25%

4	<p>JavaScript Basics</p> <p>Introduction, Your first Script, Modifying Script, Obtaining User Input with prompt Dialogs, Memory Concepts, Arithmetic, Equality and relational operators, Control structures (if statements, while statement, for statement, switch statement, do..while statements), Logical Operators, Assignment Operators, Break/Continue statements, Functions, Arrays</p>	20%
5	<p>JavaScript Advanced</p> <p>JavaScript Objects: Introduction, Math Object, String Object, Date Object, Boolean and Number Objects,</p> <p>Document Object Model: Introduction, DOM Nodes and trees, Traversing and modifying a DOM tree, DOM collections, Dynamic Styles, Using a Timer and Dynamic Styles to create Animated Effects</p> <p>Java Script Event Handling: Introduction, Reviewing the load event, Event the mousemove and the event object, Rollover with mouseover and mouseout, From Processing with focus, blur, submit and reset, Event bubbling</p>	25%

4. Text Books:

- i. Paul Deital Harvey Deitel, Abbey Deitel, Internet & World Wide Web: How to Program, 5th Edition, Pearson

5. Reference Books:

- i. Rob Larsen, Beginning HTML and CSS, WROX
- ii. Ivan Bayross, “*Web Enabled Commercial Application Development using HTML, DHTML, JavaScript, Perl CGI*”, Third revised edition, BPB Publication
- iii. Faithe Wempen, “Step by Step HTML 5”, South Asian Edition, Microsoft Press and PHI Learning
- iv. Wendy Willard, “HTML: A Beginner's Guide 5/E”, 5th Edition, McGraw Hill
- v. Teach yourself Java Script in 24 by Michael Moncur Publisher: Pearson Education
- vi. HTML Black Book by Steven Holzner, Publisher: Dreamtech Press

6. Chapter wise Coverage from Textbook(s):

Unit #	Chapters
Unit 1	Chapter 1 (1.5, 1.6,1.7,1.8, 1.9,1.10
Unit 2	Chapter 2, 3
Unit 3	Chapter 4, 5 (5.2 to 5.7)
Unit 4	Chapter 6,7,8,9,10
Unit 5	Chapter 11,12,13

Additional suggested Tutorial/ Case studies:

1) Tutorial on Location Awareness:

Geolocations Overview: determining and mapping your location with `getCurrentposition`, Determining distance with `Position`, `Options`, Following a moving location with `watchPosition`

2) Tutorial/Seminar/Workshop on Front end framework:

Overview of any front end framework for project like BootStrap

3) Case study:

1. Using all the new elements to Build a news Page
2. Using all the new elements to Build a search results Page
3. Marking up an article page with comments
4. Create a web form using all HTML5 input types
5. Using HTML5 and Bootstrap prepare your website

7. Accomplishments of the student after completing the course:

- gain an insight into web site development using HTML, CSS and JavaScript