

Annexure I

Name of the Course: Certificate course in Web Application Programming
Level - Basic

- 1. Course Objective:** The objective of this course is to provide the attendees with knowledge of HTML, CSS and JavaScript
- 2. Prerequisite:** Basic knowledge of computer fundamentals.
- 3. Teaching Schema:**

Sl. No.	Module Name	Hours
1.	Web Basics	4
2.	HTML5	24
3.	CSS3	20
4.	JavaScript	20
5.	Responsive Web Design	10
6.	Flagship Good Governance Scheme of GOI	2
Total		80

- 4. Course Delivery :** 5 hours per day 6 days per week for 3 weeks including examination and evaluation
- 5. Detailed Course Contents**

Web Basics

- Introduction to Web
- Concept of Internet- History of Internet
- Protocols of Internet
- World Wide Web
- URL
- Web Server
- Web Browser
- Today's Web Application examples such as Facebook, Google online applications YouTube, etc.



HTML 5

- Introduction to HTML5
- Basic HTML
- Introduction to basic HTML
 - Aligning the Headings
 - Anchor Tag
 - Paragraph
 - Images and Pictures
 - Tables

- Framesets
 - New features in HTML5
 - New element
 - New attribute
 - Link relations
 - Micro data
 - ARIA accessibility
 - Multimedia
 - 2D and 3D drawing Support
- HTML Forms
- HTML Controls
 - INPUT
 - Text Area
 - Radio Button
 - Check Box
 - Dropdown
 - List box
 - Submit button
 - Set button
 - Button
- List and Tables
- Document Object Model(DOM)
- Elements
- Events

HTML 5

- Elements
- Objects
- Events
- Canvas
- HTML5 Validation
- Audio & Video Support
- Geo-location Support

CSS 3

- Introducing CSS 3
- Styling HTML with CSS
- Structuring pages with CSS
- Inline Styling (Inline CSS)
- External Styling (External CSS)
- CSS Fonts
- The CSS Box Model
- The id Attribute
- The class Attribute
- HTML Style Tags
- Linking a style to an HTML document



- Internal style sheet
- Multiple styles
- Selectors and Pseudo Classes
 - Attribute Selectors
 - The Target Pseudo-Class
 - UI Element States Pseudo-Classes o Negation Pseudo-Class
 - Structural Pseudo-Classes
- Fonts and Text Effects
 - Fonts on the Web
 - Font Services
 - The @font-face Rule
 - Text Shadow
 - Word Wrapping
- Colors, Gradients, Background Images, and Masks
 - Color
 - Opacity Property
 - Backgrounds
 - background-origin, and background-size
- Borders and Box Effects
 - Image Borders
 - Rounded Corners
 - Box Shadow
- Transitions, Transforms and Animations
- Layout: Columns and Flexible Box
 - Layout: Columns and Flexible Box
 - Flexible Box Model
- Vendor Prefixes
- Embedding Media o Video Formats o Styling Video
- Accessibility Features
 - Web Accessibility
 - The CSS3 Speech Module
- Media Queries o Targeting Widths and Devices with CSS3 Media Queries
 - Responsive Images and the viewport Meta tag
 - Modernizer
 - Preprocessors
 - Frameworks and Grid Systems

JavaScript

- Introduction to JavaScript
- Advantages of using Java Script on client side over VB Script
- Variable, statements, Operators, Comments, constructs, Functions, expressions
- Variables in Java Script
 - "Var" type
 - Scope of variables
- JavaScript console



- Scope, Events, Strings, String Methods, Numbers, Number Methods, Dates, Date Formats, Date Methods
- How to handle events?
- Arrays, Array Methods in JavaScript
- Using array methods (length, reverse, sort etc)
- Creating Objects in Java Script
 - Date
 - String
 - Using Object methods
- Operators
 - Arithmetic
 - Logical
 - Bitwise
 - this
 - new
 - delete
- Booleans, Comparisons
- Control and Looping Statements
- Conditions, Switch,
- Loop For, Loop While, Break
- Functions, Function Definitions, Function Parameters, Function Invocation, Function Closures
- Common Events
 - onClick
 - onLoad
 - onMouseOver
 - onReset
 - onSubmit
- Different functions:
 - alert(), prompt(), confirm().
 - eval
 - isFinite
 - isNaN
 - parseInt and parseFloat
 - Number and String
 - escape and unescape
- Objects, Object Definitions, Object Properties, Object Methods, Object Prototypes
- Object Oriented Programming in JavaScript
 - Method
 - Constructor
 - Inheritance
 - Encapsulation
 - Abstraction
 - Polymorphism



- Javascript Validations

Responsive Web Design

- Introduction of UI Scripting
- The Best Experience for All Users
 - Desktop
 - Tablet
 - Mobile
- Bootstrap
 - Overview of Bootstrap
 - Need to use Bootstrap
 - Bootstrap Grid System, Grid Classes, Basic Structure of a Bootstrap Grid
 - Typography
 - Tables, Images, Jumbotron, Wells, Alerts, Buttons, Button Groups, Badges/Labels, Progress Bars, Pagination, List Groups, Panels, Dropdowns, Collapse, Tabs/Pills, Navbar,
 - Forms, Inputs
 - Bootstrap Grids, Grid System, Stacked/Horizontal
 - Bootstrap Themes, Templates

Flagship Good Governance Scheme of GOI

6. Requirements (S/W and H/W)

- Desktop computer (PC) having compatible processor with at least 8GB RAM .
- MS Frontpage, Visual Interdev, JavaScript editor 4.7 or latest

