

Information Booklet cum Syllabus

Of

Web Designing and Publishing (O level M2-R5.1)



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National Institute of Electronics and Information Technology

An Autonomous Scientific Society under
Ministry of Electronics and Information Technology, Government of India

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1. **About Course**

This WEB Designing Training is an ideal course to learn business applications development, websites development, Server Side programming for static websites. It allows users to design and deploy their own websites.

2. **NIELIT**

National Institute of Electronics and Information Technology, NIELIT, (Erstwhile DOEACC Society) is an autonomous scientific society of the Ministry of Electronics & Information Technology, Government of India. The Society is registered under the Societies Registration Act, 1860. NIELIT was set up to carry out Human Resource Development and related activities in the area of Information, Electronics & Communications Technology (IECT). NIELIT is engaged both in Formal & Non-Formal Education in the areas of IECT besides development of industry oriented quality education and training programmers in the state-of-the-art areas. NIELIT has endeavored to establish standards to be the country's premier institution for Examination and Certification in the field of IECT. It is also one of the National Examination Body, which accredits institutes/organizations for conducting courses in IT and Electronics in the non-formal sector.

3. **Objective of Course**

This course introduces the learner to the fundamentals of web server, HTML, CSS, JavaScript, AngularJS and Database concept. It used to develop Static websites.

This course covers the " Web Designing and Publishing " paper (Module Code: M2: R5.1/A2:R5.1) of the NIELIT 'O'/'A' Level course.

4. **Job Roles of Course**

After successful completion of the qualification the candidates shall be employed in the industries for following occupations:

- Software Designer
- Web Programmer

This course is very useful in Design and create effective web pages, Integrate graphics in web pages, Integrate various tools and techniques like HTML, CSS, JavaScript, Angular JS etc .

5. **Eligibility**

Any 10+2 student

6.Total duration of the Course

60 Hours (Theory: 24 Hrs. Practical/Tutorial: 36 Hrs.)

7. Course Details

7.1. Course Outline and Objective of Each Unit

S. No.	Unit Name	Duration (Theory) in Hours	Duration (Practical) in Hours	Total Learning Hrs.	Learning Objectives
1	Introduction to Web Design and Editors	2	2	4	After completing this unit, Learner will be able to <ul style="list-style-type: none"> Know the types of web site. Know the role of front end and back end Application. Understand working of editors.
2	HTML	4	6	10	After completing this unit, Learner will be able to develop static website using different HTML Controls.
3	Cascading Style Sheets (CSS)	5	7	12	After completing this unit, Learner will be able to <ul style="list-style-type: none"> Understand the Purpose of CSS. Role of CSS in web sites. Roles of effects in Website
4	CSS Framework	4	6	10	After completing this unit, Learner will be able to use CSS Framework to develop web site effectively.
5	JavaScript and AngularJs	6	8	14	After completing this unit, Learner will be able to understand <ul style="list-style-type: none"> Apply client side scripting Adding validations and checks on forms (web pages). Use Angular JS in webpage
6	Photo Editor	1	2	3	
7	Web Publishing and Browsing	1	1	2	The Learner will finally be able to publish the web sites.
8	Project	1	4	5	

		24	36	60	
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7.2. Detailed Syllabus

Unit Name	Contents	Hrs.
Web Design Basics And Editors	<ul style="list-style-type: none"> • Introduction of Internet • WWW, Website • Working of Websites, Webpages, Front End, Back End • Client and Server Scripting Languages, Responsive Web Designing • Types of Websites (Static and Dynamic Websites) • Notepad++ • Sublime Text Editor 	04
HTML	<ul style="list-style-type: none"> • HTML: Introduction, Basic Structure of HTML, Head Section and Elements of Head Section • Formatting Tags: Bold, Italic, Underline, Strikethrough, Div , Pre Tag Anchor links and Named Anchors Image Tag, Paragraphs, Comments • Tables: Attributes –(Border, Cellpadding, Cellspacing , height , width), TR, TH, TD, Rowspan, Colspan • Lists : Ordered List , Unordered List , Definition List • Forms, Form Elements, Input types, Input Attributes, Text Input Text Area, Dropdown, Radio buttons , Check boxes, Submit and Reset Buttons • Frames: Frameset, nested Frames • HTML 5 Introduction, HTML5 New Elements: Section, Nav, Article, Aside, Audio Tag, Video Tag • HTML5 Form Validations: Require Attribute, Pattern Attribute, Autofocus Attribute, email, number type, date type, Range type, HTML embed multimedia, HTML Layout, HTML Iframe 	10

CSS	<ul style="list-style-type: none">• Introduction to CSS• Types of CSS• CSS Selectors: Universal Selector, ID selector, Tag Selector, Class Selector, Sub Selector, Attribute Selector, Group Selector• CSS Properties: Background properties• Block Properties• Box properties• List properties• Border Properties• Positioning Properties• CSS Lists• CSS Tables,• CSS Menu Design• CSS Image Gallery	12
CSS Framework	<ul style="list-style-type: none">• Web site development w3.CSS framework• W3.css Intro• W3.CSS Colors• W3.CSS containers• W3.CSS panels• W3.CSS border• W3.CSS Table• W3.CSS Image• W3.CSS Grid• W3.CSS lists	10
JavaScript and AngularJS	<ul style="list-style-type: none">• Introduction to JavaScript• Inline JavaScript programs• Internal JavaScript programs• External link JavaScript programs• DOM• JS Functions• Loop• JS Validations• JS Popup Boxes• Introduction AngularJS?• Core Features• Controller• The AngularJS Components• MVC Architecture	14

Photo Editor	<ul style="list-style-type: none"> • Features of Photo Editing • Tools: Selection Tools • Paint Tools • Transform Tools • Text Tool • Layers, Brightness/ Contrast • Improve Colors and tone • Filters 	3
Web Publishing & Browsing	<ul style="list-style-type: none"> • Overview, SGML (Standard Generalized Markup Language) • Web hosting Basics • Documents Interchange Standards, • Components of Web Publishing, • Document management, • Web Page Design Considerations and Principles • Search and Meta Search Engines 	2
Project	<ul style="list-style-type: none"> • Website 	5

8. Reference Books/Study Material

1. HTML5, Black Book, Kagent Learning Solution Inc, 2014
2. Mastering HTML, CSS & JavaScript Web Publishing by Lemay Laura, BPB publications
3. HTML & CSS: The Complete Reference by Thomas Powell
4. Web Design, McGraw –hill
5. Learning Angular JS by Brad Dayley, Pearson

9. Practical Assignments

Assignment 1

Create an HTML file (e.g. first_page.html) that specifies a page that contains a heading and two paragraphs of text. As the texts in the heading and paragraphs you can use any texts you like .

Assignment 2

Write a HTML program to design a form which should allow to enter your personal data (**Hint:** make use of text field, password field, e-mail, lists, radio buttons, checkboxes, submit button)

Assignment 3

Write html code to generate following output.

- 1.Coffee
- 2.Tea
- 3.Black Tea

4.Green Tea

5.Milk

Assignment 4

Write HTML Code to demonstrate the use of Anchor Tag for the Following: -

1. Creating a web link that opens in a new window.
2. Creating a web link that opens in the same window.
3. C Reference within the same html document.
4. Reference to some image.
5. Making an image a hyperlink to display second image

Assignment 5

Create an html page with following specifications

Title should be about my City. Place your City name at the top of the page in large text and in blue color. Add names of landmarks in your city each in a different color, style and typeface. One of the landmark, your college name should be blinking. Add scrolling text with a message of your choice

Assignment 6

Create an html page with 7 separate lines in different colors. State color of each line in its text.

Assignment 7

Write a HTML code to generate following output

First Frame: Name and address		
Second frame		Third frame
Bulleted list of qualifications		Links to favourite sites
Fourth frame	Fifth frame	Sixth frame
Scrolling message	Blinking reminders	Image

Assignment 8

Create a HTML Document with JavaScript code that has three Textboxes and a button. The details should be accepted using textboxes are principal, rate of interest, and duration in years. When user clicks the OK Button a message box appears showing the simple interest of principal amount.

Assignment 9

Write a HTML Script to insert a hyperlink. Create a hyperlink in html which when clicked links to www.google.com in a new window

Assignment 10

Create a sample form program that collects the first name, last name, email, user id, password and confirms password from the user. All the inputs are mandatory and email address entered should be in

correct format. Also, the values entered in the password and confirm password textboxes should be the same. After validating using JavaScript, in output display proper error messages in red color just next to the textbox where there is an error.

10. Sample Questions

- 1) Which of the following is not an error in JavaScript?
 - a) Missing of Bracket
 - b) Division by zero
 - c) Syntax error
 - d) Missing of semicolons
 - 2) Which is not a form of client-side storage?
 - a) Web Databases
 - b) FileSystem API
 - c) Offline Web Applications
 - d) Online Web Applications
 - 3) Which of the following directives is used to start an angularJS application?
 - a) ng-repeat
 - b) ng-init
 - c) ng-app
 - d) ng-mode
 - 4) AngularJS expressions bind AngularJS data to HTML like which of the following directive?
 - a) ng-repeat
 - b) ng-bind
 - c) ng-app
 - d) ng-model
 - 5) To use w3.css in your program _____ add stylesheet document in the web pages.
 - a) href="https://www.w3school.com/lib/css"
 - b) href="http://www.w3schools.com/lib/w3.css"
 - c) href="http://www.w3school.com/.....lib/w3.css"
 - d) href=https://www.w3school.com/.....lib/w3.css
 - 6) which one of the following class to set background color performed by w3.css?
 - a) w3.color
 - b) w3-background-color
 - c) w3-bgcolor
 - d) w3color
 - 7) which of the following class to set element of text color?
 - a) w3.text.color
 - b) w3.css-text-color
 - c) w3.text.color
 - d) w3-text-color
 - 8) W3.CSS default font size is 20px.
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- a) True
 - b) False
- 9) Which of the following tag is used to embed css in html page?
- a) <css>
 - b) <!DOCTYPE html>
 - c) <script>
 - d) <style>
- 10) Which of the following CSS selectors are used to specify a group of elements?
- a) tag
 - b) id
 - c) class
 - d) both class and ta