

Department of Computer Science
Revised Syllabus of Diploma Programme (UG)
Diploma Programme
WEB Development

Preamble:

Given the growing demand for skilled professionals, and the rapid changes in technology, there is an increasing need to keep the academia abreast of the skill set requirement of the industry. The course has been designed to meet this requirement. This job-oriented course is designed with a proper balance of theory with practice, so that students get enough hands on experience. The project work at the end of the course enables students to get an exposure to industrial standards. In this year, a student will be able to handle computers, develop the programs in languages and other peripherals with confidence. In the subject, the student will also get a basic and proper knowledge in the field of designing skills. This course introduces intermediate to advanced web design techniques. Topics include customer expectations, advanced markup language, multimedia technologies, usability and accessibility practices, and techniques for the evaluation of web design. Upon completion, students should be able to employ advanced design techniques to create high impact and highly functional websites.

Programme Objectives:

1. To understand client server architecture and able to develop a web application.
2. To learn the skills and project-based experience needed for entry into web application and development careers.
3. Analyze the key technology components are descriptive languages, server side program elements and client side program elements.
4. Use specific contents that are beneficial for developing web-based solutions

Programme Outcomes:

1. To develop a dynamic webpage by the use of HTML, CSS and JavaScript and able to write a well formed / valid document.
2. To learn about the basics of computer networks and HTTP protocol.
3. To understand the use of descriptive languages like HTML and apply CSS and JavaScript on it.
4. Able to use web programming languages (like PHP and JavaScript) and be capable of construction less demanding web application on their own.

I Year Diploma Programme

1. Title: WEB Development
2. Year of Implementation: 2020
3. Duration: One Year
4. Pattern: Semester
5. Medium of Instruction: English
6. Contact hours: 7 hours/week
8. Structure of Course:

Syllabus Structure (UG)

Year	Semester	Course No.	Course Code	Contact Hours	Credits (1Credit=15 H)	Total Marks
1	I	CT I	DCST 101	30	2	75
		CL I	DCSL101	60	2	75
	II	CT II	DCST 202	30	2	75
		CL II	DCSL202	60	2	75
	Annual	CP I	DCSP101	30	1	50
		Total		210	9	350
2	III	CT III	DCST 303	30	2	75
		CL III	DCSL303	60	2	75
	IV	CT IV	DCST 404	30	2	75
		CL IV	DCSL404	60	2	75
	Annual	CP II	DCSP202	30	1	50
	Industrial and or Incubation and or Research and or Field Training			30	1	-
		Total		240	10	350
3	V	CT V	DCST 505	30	2	75
		CLV	DCSL505	60	2	75
	VI	CT VI	DCST 606	30	2	75
		CL VI	DCSL606	60	2	75
	Annual	CP III	DCSP303	60	2	100
	Industrial and or Incubation and or Research and or Field Training			30	1	-
	Total		270	11	400	
Total				720	30	1100

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: 10 (Theory: 06, Practical: 06, Project: 03) Theory and Practical: Semester, Project: Annual

Semester I
CT I :DCST 101: Basics of Internet and HTML
(Contact Hrs: 30 Credits: 2)

Learning Objectives:

Students will be able to

1. To learn the importance of the web as a medium of communication.
2. To analyze the components of an HTML file and create such a file.

Unit I: Computer Networks and Internet

(15)

Concept of Internet, Basic of Computer networks -LAN, MAN, WAN, Internet topology, Application of Internet, World Wide Web, Service on Internet ,Electronic-mails, Communication on Internet. Connecting to internet; What is ISP; Knowing the Internet; Basics of internet connectivity related trouble shooting, Network Architecture & types, Web Browsing software's, Search Engines, Understanding URL; Domain name; IP Address; Web Browsing software, Internet Explorer ,Surfing the Internet, Giving the URL address, Search, Moving Around in a website, Downloading, Chatting on Internet.

Unit II: Introduction to HTML

(15)

What is HTML , History, HTML Documents ,Basic structure of an HTML document ,Creating an HTML document, Features and Limitations Of HTML. Mark up Tags, Heading-Paragraphs ,Line Breaks ,HTML Tags, Formatting tags, Introduction to elements of HTML ,Working with Text. Working with Lists, Tables and Frames, Working with Hyperlinks, Images, Image format (quality, size, type, ...),Importing images (scanners) .Working with Forms and controls.

Learning Outcomes:

After completion of the unit, Student is able to

1. Analyze the Web Services and associated technologies.
2. Learn the use of different html tags and designing web pages.

Reference Books:

1. Internet Technology and Web Design - ISRD Group
2. Internet and Web Design - Ramesh Bangia, Firewall Media
3. Internet for Everyone - by Alexis Leon , Mathews Leon
4. The Internet: The Basics 5th Edition - by Whittaker, Jon Duckett, HTML and CSS, John Wiely, 2012

CL I :DCS L101: (Practical): Basics of Internet and HTML
(Contact Hrs: 60 Credits: 02)

Learning Objectives:

Students will be able to

1. To analyze the usability of development skills and website.
2. To create different kinds Web page using HTML.
3. To understand different tags in HTML.
4. To apply controls on HTML Page.

List of Practical's (15)

1. Internet – browsing, searching information using search engines.
2. Creating e-mail accounts, sending, receiving, forwarding, deleting, trash, junk mails, and attaching documents.
3. Create a basic HTML file.
4. Create an HTML document with the following formatting options:
 Bold, Italics, Underline, Headings (Using H1 to H6 heading styles),Font (Type, Size and Color)
 Background (Colored background/Image inbackground),Paragraph,Line Break, Horizontal Rule,Pretag.
5. Create an HTML document which consistsof: OrderedList,UnorderedList,Nested List,Image.
6. Create an HTML document which implements Internal linking as well as External linking.
7. Create a table using HTML which consists of columns for Roll No.,Student's name and grade.

Result		
Roll No.	Name	Grade

Result		
Roll No.	Name	Grade

8. Create a form using HTML which has the following types of controls:
 Text Box,Option/radiobuttons,Check boxes,Reset and Submit buttons
9. Create HTML documents (having multiple frames) in the following three formats:

Frame1	
Frame2	

Frame1	
Frame2	Frame3

10. Create table displaying student's information and place photo of each student in a separate column.
11. Create a static webpage using table tags of HTML.
12. Create webpage to include image using HTML tag.
13. Create employee registration webpage using HTML form objects.
14. Program to insert scrolling text using Marquee tag.
15. Program to create a simple layout of Webpage.

Learning Outcomes:

After completion of the unit, Student is able to

1. Understand how to access the Internet, Worldwide Web, as well as use Internet directories and search engines, and locate www addresses.
2. Apply various HTML tags on web page .
3. To Create web pages using different controls.
4. To build usable forms and display data clearly using tables.

Reference Books:

1. Internet Technology and Web Design - ISRD Group
2. Internet and Web Design - Ramesh Bangia, Firewall Media
3. Internet for Everyone - by Alexis Leon , Mathews Leon
4. The Internet: The Basics 5th Edition - by Whittaker, Jon Duckett, HTML and CSS, John Wiely, 2012

Semester II
CT II:D CST 202: Introduction to CSS and Web Hosting
(Contact Hrs: 30 Credits: 2)

Learning Objectives:

Students will be able to

1. To apply CSS will affect web page creation.
2. To understand the concepts of web hosting and elements of multimedia.

Unit I: Introduction to Cascading Style Sheets (15)

Concept of CSS, Creating Style Sheet, CSS Properties CSS Styling(Background, Text Format, Controlling Fonts) Working with block elements and objects ,Working with Lists and Tables ,CSS Id and Class Box Model(Introduction, Border properties, Padding Properties, Margin properties) ,CSS Advanced(Grouping, Dimension, Display, Positioning, Floating, Align, Pseudo class, Navigation Bar, Image Sprites, Attribute selector),CSS Color , Creating page Layout and Site Designs.

Unit II: Introduction to Web Publishing, Multimedia and Hosting (15)

Creating the Web Site, Saving the site , Working on the web site ,Creating web site structure , Creating Titles for web pages Themes -Publishing web sites, Inserting audio files ,Video files and acceptable formats (MPEG, Quick Time, Video for Windows). Inserting video files, Screen control attributes (WIDTH, HEIGHT, ALIGN). , Start control attributes (START, FILEOPEN, LOOP, LOOPDELAY, and MOUSEOVER). Basic concepts of Images: Digital Images and Digital Image Representation, Image Formats: TIFF, BMP, JPG/JPEG, GIF, And PIC.PDF, Hosting Basics ,Types of Hosting.

Learning Outcomes:

After completion of the unit, Student is able to

1. Apply various types of CSS on web pages.
2. Understand the use of fundamental skills to maintain web server services required to host a website.

Reference Books:

1. The Internet: The Basics 5th Edition - by Whittaker, Jon Duckett, HTML and CSS, John Wiley, 2012
2. IvanBayross, Web Enabled Commercial Application Development Using Html, Dhtml,javascript, Perl Cgi , BPB Publications, 2009.
3. HTML: The Complete Reference Paperback – by Thomas A. Powell K. Andleigh and K. Thakkar, “Multimedia System Design”, PHI,2000

CL II :DCS L202: (Practical): Introduction to CSS and Web Hosting
(Contact Hrs: 60 Credits: 02)

Learning Objectives:

Students will be able to

1. To learn applying CSS for web pages.
2. To apply various type of CSS on web pages.
3. To understand the different applications of multimedia.
4. To understand how to embed multimedia content into web pages.

List of Practical's (15)

1. Design a web page, which shows your bio-data using CSS.
2. Design a web page using CSS Layers.
3. Create a web page for product advertisement using CSS.
4. Create a html program that import an External Cascading Style Sheet (CSS) where as the style for the html program is defined in CSS file.
5. Create an external style sheet for creating a font family.
6. Design a web page by applying style sheet . [inline, embedded and linked]
7. Illustrate the creation of embedded style sheet.
8. Illustrate the procedure of creating user-defined classes.
9. Add sound and button to the movie.
10. Draw an animation to show a scene of cricket match.
11. Draw an animation to help teach a poem or a song
12. Draw an animation to show cartoon with a message
13. Make a movie showing Shape Tweening.
14. Make a movie showing Motion Tweening.
15. Draw an animation to show a bouncing ball.

Learning Outcomes:

After completion of the unit, Student is able to

1. Design web pages using various types of CSS.
2. Apply CSS on web pages to create websites.
3. Analyze the basics of e-mail, such as sending, forwarding and receiving mail, attaching documents, creating mailboxes.
4. Develop and understanding of information design and usability as it applies to interactive multimedia.

Reference Books:

1. The Internet: The Basics 5th Edition - by Whittaker, Jon Duckett, HTML and CSS, John Wiley, 2012
2. IvanBayross, Web Enabled Commercial Application Development Using Html, Dhtml,javascript, Perl Cgi , BPB Publications, 2009.
3. HTML: The Complete Reference Paperback – by Thomas A. Powell K. Andleigh and K. Thakkar, “Multimedia System Design”, PHI,2000

CP I :D CSP101 (Project)
(Contact Hrs. 30, Credits: 1)

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.

BOS Sub-Committee

1. Ms. Atar R. U. Chairman
 (Asst. Prof. YCIS, Satara)

2. Ms. Pawar V. N. Member
 (Asst. Prof. YCIS, Satara)

Expert Committee

1. Mr. Akshay Dilip Homkar Academic Expert
 (Assistant Professor, Dnyashree Institute of
 Engineering and Technology, Satara)

2. Mr. Asif Hamid Shaikh Industrial Expert
 (Software Engineer, Utopia automation
 and Control Pvt. Ltd., Satara)