CBSE | DEPARTMENT OF SKILL EDUCATION

CURRICULUM FOR SESSION 2021-2022

WEB APPLICATION (SUBJECT CODE-803)

JOB ROLE: WEB DEVELOPER

CLASS – XI & XII

COURSE OVERVIEW:

Today the world is connected through the web socially and economically. Web development has become the best-paid career choice in the modern world. A web developer is a person/an individual/ personal who is proficient in creating web sites. Web development is the process of developing websites. The process includes coding or programming that empowers websites functionality.

OBJECTIVES OF THE COURSE:

In this course, the students will be familiarized with the web programming language & photo editing tool. Learners will be prepared to get the job in the different fields of website designing, website development and graphics designing.

The following are the main objections of the course:

➢ To acquaint the students with the basis of networking.

➢ To develop the understanding of the web Architecture.

➢ To enable the students to enhance their knowledge of client-server Architecture.

➢ To prepare the students to develop static and dynamic websites.

➢ To familiarize the students with the web programming languages and photo editing software.

➢ To make the students capable of publishing a website independently.

➢ To develop the skills which will help the students to do the following:

- Graphics Designing
- Website Designing
- Website Development
- Web Applications

SALIENT FEATURES OF THE COURSE:

Web development is an emerging industry worldwide. It is developing at a very fast pace. Web application is a short term job oriented course. This course will enable the learners to understand the web development process and technique.

The importance of the course:

➢ It helps the organization to develop their own website.
➢ It generates job opportunities in the field of internet and web development.
➢ Useful for promoting business and products.
➢ It connects the individual or an organization on a web server.
➢ It is used in all kinds of sectors i.e. education, Industry, ecommerce, Banking, Marketing, to enhance the functionalities of the organizations.

SCHEME OF UNITS

This course is a planned sequence of instructions consisting of units meant for developing employability and vocational competencies of students of Class XI opting for skill subject along with other education subjects.

The unit-wise distribution of hours and marks is given overleaf:

WEB APPLICATION (SUBJECT CODE-803)
CLASS – XI (SESSION 2021-2022)
Total Marks: 100 (Theory-60 + Practical-40)

	TERM	UNITS	NO. OF HOURS for Theory and Practical		MAX. MARKS for Theory and Practical
PART A		**Employability Skills**			
	Term I	Unit 1 : Communication Skills-III	10		5
		Unit 2 : Self-Management Skills-III	10		
		Unit 3 : ICT Skills-III	10		
	Term II	Unit 4 : Entrepreneurial Skills-III	15		5
		Unit 5 : Green Skills-III	05		
		Total	**50**		**10**
PART B		**Subject Specific Skills**	**Theory**	**Practical**	**Marks**
	Term I	Unit 1: Basics of Networking and Web Architecture	10	10	10
		Unit 2: Website Development using HTML and CSS	35	50	15
	Term II	Unit 3: Multimedia Design- GIMP	20	25	10
		Unit 4: Introduction to Dynamic Websites using JavaScript	20	40	15
		Total	**85**	**125**	**50**
PART C		**Practical Work**			
		Practical Examination			15
		Practical File			10
		Viva Voce			5
		Total			**30**
PART D		**Project Work/Field Visit/ Practical File/ Student Portfolio**			10
		Total			**10**
		GRAND TOTAL		**260**	**100**

DETAILED CURRICULUM/ TOPICS FOR CLASS XI

Part-A: EMPLOYABILITY SKILLS

S. No.	Units	Duration in Hours
1.	Unit 1: Communication Skills-III	10
2.	Unit 2: Self-management Skills-III	10
3.	Unit 3: Information and Communication Technology Skills-III	10
4.	Unit 4: Entrepreneurial Skills-III	15
5.	Unit 5: Green Skills-III	05
	TOTAL DURATION	**50**

NOTE: **Detailed Curriculum/ Topics to be covered under Part A: Employability Skills can be downloaded from CBSE website.**

Part-B – SUBJECT SPECIFIC SKILLS

- Unit 1: Basics of Networking and Web Architecture
- Unit 2: Website Development using HTML and CSS
- Unit 3: Multimedia Design- GIMP
- Unit 4: Introduction to Dynamic Websites using JavaScript

UNIT-1: BASICS OF NETWORKING AND WEB ARCHITECTURE

S. NO.	LEARNING OUTCOMES	THEORY	PRACTICAL
1.	Basics of Networking and Web Architecture	- Basic network concepts - Internet, channel, Bandwidth, Data Transfer Rate - Protocols: HTTP, FTP, TCP/IP, VoIP - Types of network: PAN, LAN, MAN, WAN - Web Architecture: Types of architecture- Client Server Model, Three Tier Model, Service Oriented Architectures - Web server, Web Client - Network threats and Security measures	- Identification of network devices - Identification of types of network in school and other offices. - Demonstration of Client Server Model in actual websites.

UNIT-2: WEBSITE DEVELOPMENT USING HTML AND CSS

S. NO.	LEARNING OUTCOMES	THEORY	PRACTICAL
1.	**HTML:** Students would be able to: - Understand basic concepts of website - Differentiate between static and dynamic website - Analyse static websites - Appreciate various tags in HTML - Create static website using HTML	- Concept of website, its need and purpose - Types of websites: Static and dynamic website - Languages used for website development - HTML: basic tags, formatting tags, Adding images, Lists - Embedding multimedia in Web pages - Inserting tables - Internal and External Linking - Frames, Forms	- Visit and appreciate various websites - Identify and differentiate between static and dynamic website - Web pages using different HTML tags - Creating and linking web pages - Creating small websites using frames - Create forms
2.	**Cascading Style Sheets:** Students will be able to: - appreciate advantages of cascading style sheets	- Basics of Cascading Style sheets - Advantages of CSS - External Style sheet - Internal style sheet - Inline style sheet - CSS Syntax- Selector, Property, Value - Overriding, Comments, color, background, Font, images	- Creating simple CSS - Using CSS in simple Web pages - Creating website using CSS
3.	**Publishing:** Students will be able to: - - understand requirements for publishing a website - identify different domains and domain name system	- Publishing: Introduction - Introduction to Domain Naming System (DNS) - DNS Server - Domain Space Provider - Domain Name registration process and acquiring domain space - Website Hosting - Website publishing tools - Publish a website	- View different websites and identify their domain - Register a domain with DNS Provider - Publish and host website

UNIT-3: MULTIMEDIA DESIGN- GIMP

S. NO.	LEARNING OUTCOMES	THEORY	PRACTICAL
1.	Students would be able to: - - Appreciate interface of GIMP - Understand and use drawing tools, selections - Appreciate different color modes - Create and edit images - Appreciate and use filters and layers - Develop skill to create and edit an image	Gimp as a graphics tool Gimp interface, color modes, Toolbox: selection tools, paint tools, transform, color tools, foreground, background. Creating and editing images Filter tools like Blur, Enhance, Distort, Light and shadow, Noise, edge detection, artistic filters, décor, map, render, alpha etc. Layers : creating , rearranging and masking layers	− working in GIMP window, understand Interface using drawing tools and selection tools like rectangle, intelligent scissors, ellipse etc. creating and editing images − image enhancement using different filters. creating layers, rearranging layers, using Layers to merge and create new images

UNIT-4: INTRODUCTION TO DYNAMIC WEBSITES USING JAVASCRIPT

S. NO.	LEARNING OUTCOMES	THEORY	PRACTICAL
1.	Students would be able to: - - Analyze limitations of static websites - Understand dynamic websites and their need - Understand Basics of JavaScript - Appreciate advantages and features of JavaScript - Develop interactive web pages using JavaScript	Limitations of static websites Dynamic websites Features of JavaScript, extension of JavaScript Syntax of JavaScript, data types, operators, variables, <script> tag, <button> Document object Creating interactive web pages using JavaScript Selection Statement using if and Switch Iterative statement: for, for/in, while, do while break and continue	Create web pages using JavaScript Various programs using operators, iterative statements, selection statements in JavaScript

WEB APPLICATION (SUBJECT CODE-803)
CLASS – XII (SESSION 2021-2022)
Total Marks: 100 (Theory-60 + Practical-40)

	TERM	UNITS	NO. OF HOURS for Theory and Practical		MAX. MARKS for Theory and Practical
PART A		**Employability Skills**			
	Term I	Unit 1 : Communication Skills-IV	10		5
		Unit 2 : Self-Management Skills-IV	10		
		Unit 3 : ICT Skills-IV	10		
	Term II	Unit 4 : Entrepreneurial Skills-IV	15		5
		Unit 5 : Green Skills-IV	05		
		Total	**50**		**10**
PART B		**Subject Specific Skills**	**Theory**	**Practical**	**Marks**
	Term I	Unit 1: Movie Editing Tools	10	25	10
		Unit 2: Customizing and Embedding Multimedia Components in Web Pages	25	20	12
		Unit 3: Web Scripting – Java Script	08	10	03
	Term II	Unit 3: Web Scripting – Java Script	22	50	17
		Unit 4: Work Integrated Learning IT– WA-II	20	20	8
		Total	**85**	**125**	**50**
PART C		**Practical Work**			
		Practical Examination • Movie Editing Tools**: (5 Marks)** • Customizing and Embedding, Multimedia, Components in Web Pages **(05 Marks)** • Web Scripting - JavaScript **(10 Marks)**			20
		Practical File			5
		Viva Voce			5
		Total			**30**
PART D		**Project Work/Field Visit /Practical File/ Student Portfolio**			10
		Total			**10**
		GRAND TOTAL	**260**		**100**

DETAILED CURRICULUM/ TOPICS FOR CLASS XII

PART-A: EMPLOYABILITY SKILLS

S. No.	Units	Duration in Hours
1.	Unit 1: Communication Skills-IV	10
2.	Unit 2: Self-Management Skills-IV	10
3.	Unit 3: Information and Communication Technology Skills-IV	10
4.	Unit 4: Entrepreneurial Skills-IV	15
5.	Unit 5: Green Skills-IV	05
	TOTAL DURATION	**50**

NOTE: Detailed Curriculum/ Topics to be covered under Part A: Employability Skills can be downloaded from CBSE website.

PART-B – SUBJECT SPECIFIC SKILLS:

- Unit 1: Movie Editing Tools

- Unit 2: Customizing and Embedding Multimedia Components in Web Pages.

- Unit 3: Web Scripting – Java Script

- Unit 4: Work Integrated Learning IT – WA-II.

	UNIT TITLE	TOTAL MARKS
UNIT-1	**Movie Editing Tools**: - Familiarization of Interface Components. - Importing Pictures. - Importing Audio and Video Files. - Splitting and Joining Movie Clips. - Adding Titles and publishing	10
UNIT-2	**Customizing and Embedding Multimedia components in Web Pages:** - Compatible Multimedia file formats for Web Pages. - Embedding Audio file. - Embedding Video file. - Embedding Flash file.	12

	UNIT TITLE	TOTAL MARKS
UNIT- 3	**Web Scripting – JavaScript:** - Java Script review. - Functions -user defined. - String Object. - Math Object. - Array Object. - Events - Case Studies.	20
UNIT-4	**Work Integrated Learning IT – WA-II:** – Advanced Features of Web Design. – Code view, Add-ins / Snippets and Page Transitions. – Dynamic Web templates. – SEO - Search Engine Optimization. – Forms - Advanced. – Publishing web pages or Websites-I. – Publishing web pages or websites-II. – Authoring tools. – CSS templates.	8
	TOTAL MARKS	**50**

PART C: PRACTICAL SKILLS:

DETAILS	MARKS DISTRIBUTION
Programs / Practical Questions - Movie Editing Tools (**10 Marks**) - Customizing and Embedding, - Multimedia, Components in Web Pages (**10 Marks**) - Web Scripting - Java Script (**5 Marks**)	25
Project / Practical File	10
Viva Voce	05
TOTAL MARKS	**40**

LIST OF EQUIPMENT AND MATERIAL:

Following is the proposed list of basic tools and equipments for conducting the practical examination. The list given below is suggestive and not an exhaustive list to be prepared by the vocational teacher so that the routine tasks can be performed by the students regularly for practice and acquiring adequate practical experience:

1. Desktop / Laptop
2. Printer
3. Scanner
4. Digital image Capturing Device (Digital Camera/ Webcam etc.)
5. Software- GUI Operating System, Web Browser, GIMP, Text Editor (Notepad) etc.
6. Internet Connection

NOTE: Students should be exposed to various Networks, Websites, during Field Visits.

CAREER OPPORTUNITIES:

The Web Application course raised the opportunities in all the industries worldwide. The job profiles for the web developers are: -

- ❖ Web Applications Developer
- ❖ Front End Web Developer
- ❖ Back-end web Developer
- ❖ Design and Layout analyst
- ❖ Web marketing analyst
- ❖ Senior Web analyst
- ❖ Brand Development
- ❖ E-Commerce Design and Development
- ❖ Product Designer
- ❖ Design Studio
- ❖ IT companies
- ❖ UX Designer (User Experience Designer)
- ❖ U I Designer (User Interface Designer)

VERTICAL MOBILITY:

The students can do: -

- ❖ Graduation in Multimedia and Website Designing
- ❖ Diploma in Web Designing,
- ❖ PG Diploma in Internet & Web Designing.
- ❖ Graduation and Diploma courses in E-Commerce and web Design