CBSE | DEPARTMENT OF SKILL EDUCATION

CURRICULUM FOR SESSION 2025-2026

WEB APPLICATIONS (SUB. CODE – 803)

JOB ROLE: WEB DEVELOPER & GRAPHIC DESIGNER

CLASS – XI

COURSE OVERVIEW:

The Internet, built through web development, lets businesses spread far beyond their physical location. A website acts like a store that's always open, showcasing products and services to anyone in the world, whenever they want. But a website's design is just as important as its content. Eye-catching graphics that reflect your brand identity are key to a successful website. They not only make your site attractive to visitors, but also help you achieve your marketing goals by making it easier for people to navigate and find what they're looking for, ultimately converting them into customers.

COURSE OUTCOME:

On completion of the course, students should be able to:

- Get acquainted with the basics of networking.
- Develop the understanding of web Architecture and types of networks.
- Understand the threats that may arise due to networking.
- Be familiar with various network devices.
- Safeguard our systems that are on a network.
- Understand the difference between static and dynamic websites.
- Create attractive and interesting web pages using HTML & CSS.
- Familiarize themselves with photo editing software and its various features.
- Demonstrate the use of colors, filters and layers on the image.
- Get acquainted with a programming language such as JavaScript and explain its importance.
- Demonstrate proficiency in writing JavaScript programs using conditional statements and iterative statements
- Apply JavaScript programs in websites to create dynamic websites

COURSE OBJECTIVES:

The course aims to provide a comprehensive understanding of the course topics and equip learners with practical skills and knowledge relevant to networking, website development, photo editing and programming.

- Understand the significance of data communication and networking.
- Understand the terminologies used in data communication.
- Understand about the various types of networks and network devices.
- Understand client-server and peer-to-peer web architecture.
- Identify possible network threats and implement appropriate security precautions.
- Learn how to create a webpage using HTML tags.
- Learn how to use lists, tables, and images.
- Learning how to use forms and hyperlinks.
- Understand how to include audio and video resources into a webpage.
- Understand about CSS and its three implementation methods.
- Utilizing Div, comprehend the CSS Box Model and able to utilize CSS on a website.
- Learn how to use a variety of multimedia design tools.
- Know the GIMP and its Toolbox in particular.
- Know the GIMP's filter concepts.
- Understand how to use GIMP's Layers.
- Learn about JavaScript, a programming language.
- Understand the definition of JavaScript and its interpretation.
- Learn about the benefits and features of JavaScript.
- Understanding the guidelines and typical mistakes in JavaScript.
- Know how to use the script's input and output.
- Become acquainted with how to use JavaScript's Data Types, Variables, and Operators.
- Learn about JavaScript's built-in functions and use loops and conditional statements

SALIENT FEATURES:

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 course is important in following ways:

- It helps the organization to develop their own website.
- It generates job opportunities in the field of web development and graphic designing.
- 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

Total Marks: 100 (Theory-60+Practical-40)

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 subjects along with other subjects.

The unit-wise distribution of hours and marks for class XI is as follows:

WEB APPLICATION (SUBJECT CODE-803)
CLASS – XI (SESSION 2025-2026)
Total Marks: 100 (Theory-60 + Practical-40)

	UNITS	NO. OF HOURS for Theory and Practical		MAX. MARKS for Theory and Practical
Part A	**EMPLOYABILITY SKILLS**			
	Unit 1: Communication Skills-III	10		2
	Unit 2: Self-Management Skills-III	10		2
	Unit 3: ICT Skills-III	10		2
	Unit 4: Entrepreneurial Skills-III	15		2
	Unit 5: Green Skills-III	05		2
	Total	**50**		**10**
Part B	**SUBJECT SPECIFIC SKILLS**	**Theory**	**Practical**	**Marks**
	Chapter1: Basics of Networking	10	10	10
	Chapter 2: Website Building Using HTML and CSS	35	50	15
	Chapter 3: Multimedia Design Using GIMP	20	25	10
	Chapter 4: JavaScript Part 1	20	40	15
	Total	**85**	**125**	**50**
Part C	**PRACTICAL WORK**			
	Practical Examination			
	Practical Exam based on HTML and CSS, GIMP & JavaScript			15
	Viva Voce			5
	Total			**20**
Part D	**PROJECT WORK (Do any one)** 1. Create a website using HTML & CSS 2. Design poster/E-invite/brochure/ advertisement using GIMP			10
	PORTFOLIO/ PRACTICAL FILE: **HTML Programs:** Images, Lists, Tables, Hyperlinks, Form **JavaScript Programs:** Any 5 JavaScript programs based on the content.			10
	Total			**20**
	GRAND TOTAL	**210**		**100**

DETAILED CURRICULUM/ TOPICS:

Part-A: EMPLOYABILITY SKILLS

S. N	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	**50**

Note: The detailed curriculum/ topics to be covered under Part A: Employability Skills can be downloaded from CBSE website.

Part-B – SUBJECT SPECIFIC SKILLS

- Chapter1: Basics of Networking
- Chapter 2: Website Building Using HTML and CSS
- Chapter 3: Multimedia Design Using GIMP
- Chapter 4: JavaScript Part 1

CHAPTER 1: BASICS OF NETWORKING

S. No	LEARNING OUTCOMES	THEORY	PRACTICAL
1	● Understand the concept of Networking and Data Communication.	1. What is Networking? ● Concept of Communication ● Components of Data Communication ● Internet 2. Advantages and Disadvantages of Networks	● Identification of network devices ● Identification of types of networks in school and other offices. ● Demonstration of Client Server Model in actual websites. ● Awareness of Security threats in a network
2	● Get familiar with data communication terminology.	3. Data Communication Terminology ● Communication Channel ● Bandwidth ● Data Transfer Rate ● IP Address	
3	● Know about various Network Devices and types of Networks.	4. Network devices 5. Types of Networks ● PAN ● LAN ● MAN ● WAN	
4	● Get familiar with Peer-to-Peer and Client-Server Web Architecture.	6. Web Architecture ● Peer-to-Peer ● Client-Server	
5	● Be aware of Network Threats and the Security Measures to be taken.	7. Network threats and Security measures ● Virus and Malware ● Phishing and Spam ● Denial of Service ● Security Tools	

CHAPTER 2: WEBSITE BUILDING USING HTML AND CSS

S. No	LEARNING OUTCOMES	THEORY	PRACTICAL
1	● Understand basic concepts of website	● Concept of website, its need and purpose ● Types of websites: Static and dynamic website ● Languages used for website development	● Visit and appreciate various websites ● Identify and differentiate between static and dynamic website
2	● Know about creating a webpage using the tags in HTML.	● Introduction to HTML ● Basic Tags in HTML ● Formatting Tags	● Creating Web pages using different HTML tags

3	● Understand the usage of Images, Lists and Tables.	● Inserting images
		 ● Inserting Lists
		   ● Ordered Lists
		   ● Unordered Lists
		   ● Definition Lists
		 ● Inserting Tables
		 ● Div and Span Tags
			● Creating Web pages with insertion of images, Lists and Tables

4	● Get familiar with Hyperlinks and Forms.	● Hyperlinks
		   ○ Internal linking
		   ○ External Linking
		 ● Forms
			● Creating and linking web pages
			 ● Create forms

5	● Know how to embed audio and video files in a web page.	Embedding Audio and Video files in Web pages	● Creating Web pages with insertion Audios and Videos

6	● Get familiar with CSS and the three ways to implement it.	● Basics of Cascading Style sheets
		 ● Advantages of CSS
		 ● Three ways to implement CSS
		   ○ External Style sheet
		   ○ Internal style sheet
		   ○ Inline style sheet
			● Creating simple programs using CSS

7	● Understand the CSS Box Model using Div.	● CSS Box Model using Div	● Using CSS Box Model in programs
8	● Be able to use CSS in a webpage.	● CSS Comments ● CSS Syntax and Tags	● Using CSS in simple Web pages ● Create website using CSS

CHAPTER 3: MULTIMEDIA DESIGN USING GIMP

S. No	LEARNING OUTCOMES	THEORY	PRACTICAL
1	• Multimedia Design Tools	• What is Multimedia?	• Understand GIMP Interface using drawing tools and selection tools like rectangle, intelligent scissors, ellipse etc. creating and editing images
2	• Introduction to GIMP	• Use of GIMP • Features of GIMP • How to install GIMP on your systems • Starting GIMP on a system. • Components of GIMP • GIMP Docks • GIMP Window Modes • How to create a file in GIMP • How to open an image in GIMP • How to save a file in GIMP	• Image enhancement using different filters.
3	• GIMP Toolbox	• Selection Tools • Text Tool • Color Picker Tool • Zoom Tool • Color Tool	• Creating layers, rearranging layers
4	• Filters	• Steps to use various filters on image files and display the edited image	• Using Layers to merge and create new images
5	• Working with Layers	• Creating a new layer • Renaming a layer • Duplicating a layer • Merging layers • Layer Masking	• Students can make a brochure, advertisement, e-invite, poster, birthday card etc using GIMP and its tools.

CHAPTER 4: JAVASCRIPT PART 1

S.No	LEARNING OUTCOMES	THEORY	PRACTICAL
1	• Introduction to JavaScript	• History of JavaScript • JavaScript as an Interpreted Language • Static and Dynamic Website • Features of JavaScript • Advantages of JavaScript	• Understand concept of programming • Understand the use of data types and variables
2	• Prerequisites for working in JavaScript	• Text editor and a browser	• Writing simple programs using operators, inbuilt functions iterative statements, conditional statements in JavaScript
3	• Introduction to Script Tag	• What is a Script tag? • Writing first JavaScript • program • JavaScript Syntax and Rules • Common Errors • Internal & External Java Script	
4	• Input and Output from the script	• document.write method • Dialog boxes • Interacting with HTML	• Programs are given at the end of the chapter which have to be done with the students.
5	• Data Types in JavaScript	• Primitive Data Types • Non-Primitive Data Types	
6	• Variables in JavaScript	• Variable Naming Convention • Variable Declaration and Initialization • JavaScript Variable Scope • JavaScript Literals	
7	• Operators in JavaScript	• Arithmetic Operators • Comparison (or Relational) Operators • Logical Operators • Assignment Operators	

		• Conditional Operator • typeof Operator • Operator Precedence & Associativity	
8	• Inbuilt functions in JavaScript	• parseInt() • parseFloat() • valueOf() • isNaN()	
9	• Control of flow using Conditional Statements	• Using if..else statements • Using switch...case statement:	
10	• Control of flow using Loops	• for loop • while loop • break & continue	

LIST OF EQUIPMENT/ MATERIALS:

The list given below is suggestive and an exhaustive list should be compiled from the feedback given by various teachers teaching the subject. Only basic tools, equipment and accessories should be procured by the Institution so that the routine tasks can be performed by the students regularly for practice and acquiring adequate practical experience.

S. No.	ITEM NAME, DESCRIPTION & SPECIFICATION	QUANTITY
A	**HARDWARE**	
1.	Computer with latest configuration and minimum 64 GB RAM, 512 GB HDD or SSD, 17" LED Monitor, NIC Card, 3 button Mouse, 105 keys key board and built-in speakers and mic.	15
2.	Laser Printer - Black	01
3.	Inkjet Printers (Colour & Black)	01
4.	Scanner	01
5.	Online UPS 5 KVA	01
6.	16 Port Switches	01
7.	Air Conditioner 1.5 ton	02
8.	Broadband Connection for Internet	01
9.	Fire extinguisher	01
B	**SOFTWARE**	
1.	GUI Operating System	
2.	Text Editor (Notepad)	
3.	Web Browser.	
4.	GIMP, Canva and Adobe Express	
5.	Internet Connection	
C	**FURNITURE**	
1.	Class room chairs and desks	25
2.	Computer Tables	15

3.	Straight back revolving & adjustable chairs (Computer Chairs)	15
4.	Printer Tables	02
5.	Trainers Table	01
6.	Trainers Chair	01
7.	Steel cupboards drawer type	02
8.	Cabinet with drawer	01
9.	Steel Almirah - big size	01
10.	Steel Almirah- small size	01

TEACHER'S/ TRAINER'S QUALIFICATIONS:

Qualification and other requirements for appointment of teachers/trainers for teaching this subject, on contractual basis should be decided by the State/ UT. The suggestive qualifications and minimum competencies for the teacher should be as follows:

Qualification	Minimum Competencies	Age Limit
Bachelor of Engineering/ Technology in Computer Science/ Information Technology from AICTE approved Institute/ University or M.Sc. Computer Science / IT or MCA / DOEACC 'B' level The suggested qualification is the minimum criteria. However higher qualifications will also be acceptable.	• The candidate should have a minimum of 1 year of work experience in the same job role. • S/He should be able to communicate in English and local language. • S/He should have knowledge of equipment, tools, material, Safety, Health & Hygiene.	• 24-37 years (as on Jan. 01 (year)) • Age relaxation to be provided as per Govt. rules

Teachers/Trainers form the backbone of Skill (Vocational) Education being imparted as an integral part of Rashtriya Madhyamik Shiksha *Abhiyan* (RMSA). They are directly involved in teaching of Skill (vocational) subjects and also serve as a link between the industry and the schools for arranging industry visits, On-the-Job Training (OJT) and placement.

These guidelines have been prepared with an aim to help and guide the States in engaging quality Teachers/Trainers in the schools. Various parameters that need to be looked into while engaging

the Vocational Teachers/Trainers are mode and procedure of selection of Teachers/ Trainers, Educational Qualifications, Industry Experience and Certification/ Accreditation.

The State may engage Teachers/Trainers in schools approved under the component of scheme of Vocationalisation of Secondary and Higher Secondary Education under RMSA in following ways:

i. Directly as per the prescribed qualifications and industry experience suggested by the PSS Central Institute of Vocational Education (PSSCIVE), NCERT or the respective Sector Skill Council (SSC).

OR

ii. Through accredited Vocational Training Providers accredited under the National Quality Assurance Framework (NQAF*) approved by the National Skill Qualification Committee on 21.07.2016. If the State is engaging Vocational Teachers/Trainers through the Vocational Training Provider (VTP), it should ensure that VTP should have been accredited at NQAF Level2 or higher.

The National Quality Assurance Framework (NQAF) provides the benchmarks or quality criteria which the different organizations involved in education and training must meet in order to be accredited by competent bodies to provide government- funded education and training/skills activities. This is applicable to all organizations offering NSQF-compliant qualifications.

The educational qualifications required for being a Teacher/Trainer for a particular job role are clearly mentioned in the curriculum for the particular NSQF compliant job role. The State should ensure that teachers/ trainers deployed in the schools have relevant technical competencies for the NSQF qualification being delivered. Teachers/Trainers preferably should be certified by the concerned Sector Skill Council for the particular Qualification Pack/Job role which S/he will be teaching. Copiesof relevant certificates and/or record of experience of the teacher/trainer in the industry should be kept as record.

To ensure the quality of the Teachers/Trainers, the State should ensure that a standardized procedure for selection of (Vocational) Teachers/Trainers is followed. The selection procedure should consist of the following:
  (i) Written test for the technical/domain specific knowledge related to the sector;
  (ii) Interview for assessing the knowledge, interests and aptitude of trainer through a panel ofexperts from the field and state representatives; and
  (iii) Practical test/mock test in classroom/workshop/laboratory.

In case of appointment through VTPs, the selection may be done based on the above procedure bya committee having representatives of both the State Government and the VTP.

The State should ensure that the Teachers/ Trainers who are recruited should undergo induction training of 20 days for understanding the scheme, NSQF framework and Vocational Pedagogy before being deployed in the schools.

The State should ensure that the existing trainers undergo in-service training of 5 days every year to make them aware of the relevant and new techniques/approaches in their sector and understandthe latest trends and policy reforms in vocational education.

The Head Master/Principal of the school where the scheme is being implemented should facilitateand ensure that the (Vocational) Teachers/Trainers:
  • Prepare session plans and deliver sessions which have a clear and relevant purpose andwhich

engage the students;

- Deliver education and training activities to students, based on the curriculum to achieve thelearning outcomes;

- Make effective use of learning aids and ICT tools during the classroom sessions;

- Engage students in learning activities, which include a mix of different methodologies, such as project-based work, team work, practical and simulation-based learning experiences;

- Work with the institution's management to organize skill demonstrations, site visits, on job trainings, and presentations for students in cooperation with industry, enterprises and other workplaces;

- Identify the weaknesses of students and assist them in up-gradation of competency;

- Cater to different learning styles and level of ability of students;

- Assess the learning needs and abilities, when working with students with different abilities

- Identify any additional support the student may need and help to make special arrangementsfor that support;

- Provide placement assistance

Assessment and evaluation of (Vocational) Teachers/Trainers is very critical for making them aware of their performance and for suggesting corrective actions. The States/UTs should ensure that the performance of the (Vocational) Teachers/Trainers is appraised annually. Performance based appraisal in relation to certain pre-established criteria and objectives should be done periodically to ensure the quality of the (Vocational) Teachers/Trainers.

Following parameters may be considered during the appraisal process:

- Participation in guidance and counseling activities conducted at Institutional, District andState level;
- Adoption of innovative teaching and training methods;
- Improvement in result of vocational students of Class X or Class XII;
- Continuous up-gradation of knowledge and skills related to the vocational pedagogy,communication skills and vocational subject;
- Membership of professional society at District, State, Regional, National and Internationallevel;
- Development of teaching-learning materials in the subject area;
- Efforts made in developing linkages with the Industry/Establishments;
- Efforts made towards involving the local community in Vocational Education
- Publication of papers in National and International Journals;
- Organization of activities for promotion of vocational subjects;
- Involvement in placement of students/student support services.

CAREER OPPORTUNITIES:

In today's rapidly evolving digital era, staying ahead of emerging trends is paramount for individuals seeking to thrive in the dynamic landscape of technology and innovation. This comprehensive course offers a holistic exploration of cutting-edge concepts and practical skills across various domains, ranging from foundational programming principles to advanced topics in graphic design, cybersecurity, and emerging technologies. Through a structured curriculum encompassing JavaScript programming, graphic design using industry-standard tools like Canva and Adobe Express, and crucial insights into cyber safety and security, participants will not only develop technical expertise but also gain invaluable insights into the latest trends shaping our digital world. Whether aspiring to become proficient web developers, creative graphic designers, cybersecurity specialists, or innovative

entreprendurs in emerging technologies, this course equips individuals with the multifaceted skill set needed to succeed in today's dynamic and competitive job market. Join us on this journey of exploration and skill-building, where the possibilities are as limitless as the ever-expanding horizons of technology.

List of potential career opportunities for students after completing the entire course are:
- IoT Specialist/Edge Computing Specialist
- Cloud Computing Engineer
- Artificial Intelligence/Machine Learning Engineer
- Digital Marketer/Social Media Manager
- Cybersecurity Specialist
- Graphic Designer/UI/UX Designer
- Full-Stack Web Developer
- E-Learning Developer
- Operating Systems Administrator
- Entrepreneur in Emerging Technologies
- Social Media Content Writing and Event Management

VERTICAL MOBILITY

Students can pursue :
- Engineering in Computer Science or IT
- Graduation in Multimedia and Graphic Website Designing
- PG Diploma in Internet & Web Designing.
- Graduation and Diploma courses in E-Commerce and web Design