

**Department of Computer Science and Application**  
Atal Bihari Vajpayee Vishwavidyalaya, Bilaspur (C.G.)



**Scheme and Syllabus**  
of  
**POST GRADUATE CERTIFICATE**  
IN  
**WEB DEVELOPMENT**  
(w.e.f. Academic Session 2022-23)

Program Code: .....PGC-002

# Department of Computer Science and Application

ATAL BIHARI VAJPAYEE VISHWAVIDYALAYA BILASPUR (C.G.)

(A State University, Established by the Government of Chhattisgarh)

## 1. About the Course

In this course is designed to start you on a path toward future studies in web development and design, no matter how little experience or technical knowledge you currently have. The web is a very big place, and if you are the typical internet user, you probably visit several websites every day, whether for business, entertainment or education. But have you ever wondered how these websites actually work? How are they built? How do browsers, computers, and mobile devices interact with the web? What skills are necessary to build a website? With almost 1 billion websites now on the internet, the answers to these questions could be your first step toward a better understanding of the internet and developing a new set of internet skills.

By the end of this course, you'll be able to describe the structure and functionality of the world wide web, create dynamic web pages using a combination of HTML, CSS, and JavaScript, apply essential programming language concepts when creating HTML forms, select an appropriate web hosting service, and publish your Webpages for the world to see. Finally, you'll be able to develop a working model for creating your own personal or business websites in the future and be fully prepared to take the next step in a more advanced web development or design course or specialization.

## 2. Scope

Web development can be an excellent, lucrative career, if you are passionate about developing websites, web apps, or doing UI/UX work. However, you need to frequently upgrade your skills as it is a continuously evolving field.

## 3. Course Learning Outcome

After completion of this course the students will be able to:

- Structure and implement HTML/CSS,
- Apply intermediate and advanced web development practices.
- Implement basic JavaScript,
- Create visualizations in accordance with UI/UX theories,
- Develop a fully functioning website and deploy on a web server,
- Learner will be able to use simplicity, efficiency, security, familiarity and Open source features of PHP,
- Create Webpages that function using external data.
- Learner will be able to design device friendly website using bootstrap,
- Develop JavaScript applications that transition between states,
- Identify mobile strategies and design for multiple operating systems,
- Learner will be able to use different API's for implementing functions into website.

4. **Eligibility Criteria** - Any graduate.

5. **Fees structure** - One-time tuition fees of Rs. 5000/- + Misc. Fee as applicable.

6. **Intake** - 30 Seats.

7. **Duration** - 6 Months (probably from August to January).

8. **Prerequisite** - There are no prerequisites to learn web development.

## 9. Scheme of Examination

S. No	Course Name	UE	IA	MAX	MIN	Credit
1	Theory: Web Development	75	25	100	40	4
2	Practical based on theory	75	25	100	40	2
	<b>Total</b>	150	50	200	80	6

UE: University exam IA: Internal Assessment

## 10. Course Contents

### Module - I

**Introduction to Web Development:** This module provides an overview of how websites function, their structure, and the ins and outs of choosing a website name and selecting an online host to house your website.

### Module - II

**HTML5:** Introduction to html5, the structure of webpage, creation of full webpage, header tags, paragraph tags, formatting text, on-ordered list, ordered list, images, forms, tables, links, html entities, audio & video, iframe, putting it all together.

### Module - III

**CSS3:** Introduction to CSS, inline CSS, internal CSS, Classes and ID's, Div's, Color's, Floating, Positioning, Margins, Paddings, Borders, Fonts, Styling Text, Aligning Text, Styling Links, Designing Demo webpage using CSS.

### Module - IV

**JavaScript:** Introduction to JavaScript, Internal JavaScript, Accessing Elements, responding to a Click, Website Content, Manipulating Styles with JavaScript, Mini Challenge - Disappearing Circle, Variables, Arrays, If Statements, Loops, While Loops, Functions, External JavaScript, JavaScript Project - Reaction Teste.

### Module - V

**jQuery:** Introduction To jQuery, Using jQuery In Your Webpages, Detecting A Click, Changing Website Content, Changing Website Styles, Fading Content, Animating Content, AJAX, Regular Expressions, Mini Project - Form Validation, Introducing jQuery UI, Draggable & Resizable, Droppable, Accordion & Sortable.

### Module - VI

**Bootstrap 5:** Introduction to Bootstrap 5, Your First Bootstrap Site, The Grid System, Introducing Navbars, Forms & Tables, Bootstrap Components, Modals, Popovers & Tooltips, The Free Bootstrap Themes. Project - App Landing Page.

### Module - VII

**Word Press;** Introduction to WordPress, The WordPress Dashboard, 6.3 WordPress Themes, Creating A Blog.

### Module - VIII

**PHP:** Introduction To PHP, Hello World With PHP, Variables, Arrays, If Statements, For and For Each Loops, While Loops, GET Variables, POST Variables, Sending an Email With PHP, Mini Project - A Contact Form, Getting Contents of Other Scripts. An overview of Laravel Framework.

## Module - IX

**MySQL:** Introduction to MySQL, Connecting to A Database, Retrieving Data from A Database, Inserting and Updating Data, Looping Through Data, Session Variables, Cookies, Storing Passwords Securely, A note about secure passwords - password hash (), MySQL – Quiz.

## Module - X

**API:** Introduction to APIs, What's the Weather, The Google Maps API, Geocoding with Google Maps, The Twitter API, The Twitter API – UPDATE, APIs – Quiz.

## Module - XI

**Exception Handling:** Exception, Exception Handling, except clause, Try? Finally, clause, User Defined Exceptions.

## TEXT/ REFERENCE BOOKS

1. The Road to React: Your journey to master React.js in JavaScript (2022 Edition) - Robin Weiruch.
2. Learning PHP, MySQL & JavaScript: With jQuery, CSS & HTML. -Robin Nexon.

## E-RESOURCES

1. <https://www.w3schools.com/html/default.asp>
2. <https://www.w3schools.com/css/default.asp>
3. <https://www.w3schools.com/js/default.asp>
4. <https://www.javatpoint.com/javascript-tutorial>
5. <https://www.w3schools.com/bootstrap5/index.php>
6. <https://www.w3schools.com/jquery/default.asp>
7. <https://codecourse.com/>
8. [https://onlinecourses.swayam2.ac.in/aic20\\_sp32/course](https://onlinecourses.swayam2.ac.in/aic20_sp32/course)
9. <https://spoken-tutorial.org/>