Objective: The increasing use of Internet and WWW encourages everyone to use web-based solutions for their requirements. Web technology refers to the methods by which End-user devices like computers/mobiles communicate with each other. This communication involves the use of web publishing languages like HTML, CSS and JavaScript. This subject will attempt to give you a basic understanding of various aspects of HTML, CSS and JavaScript.

Credits Earned: 4 Credits

Course Outcomes: End of this course will help to understand following aspects.

- To understand and compare the fundamentals of Web hosting and domain name services. (Analysis)
- To understand various non-browser specific web design principles. (Knowledge)
- To understand the need and be able to develop HTML/XHTML and CSS pages with valid structure as well as content. (Synthesis)
- To understand and be able to develop JavaScript/jQuery code to access the DOM structure of web document and object properties. (Synthesis)
- To understand and be able to develop a complete website using Bootstrap 4.0 (Synthesis)

Pre-requisite of course: Programming Fundamentals

Teaching and Examination Scheme

<table>
<thead>
<tr>
<th>Teaching Scheme (Hours)</th>
<th>Credits</th>
<th>Theory Marks</th>
<th>Tutorial / Practical Marks</th>
<th>Total Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theory</td>
<td>Tutorial</td>
<td>Practical</td>
<td>ESE (E)</td>
<td>Mid Sem (M)</td>
</tr>
<tr>
<td>3</td>
<td>0</td>
<td>2</td>
<td>4</td>
<td>50</td>
</tr>
</tbody>
</table>

Contents:

<table>
<thead>
<tr>
<th>Unit</th>
<th>Topics</th>
<th>Contact Hours</th>
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<tbody>
<tr>
<td>1</td>
<td>Introduction and Web Design: Introduction to Internet, WWW and Web 2.0, Web protocols and Web servers, Web Design Principles and Web site structure</td>
<td>4</td>
</tr>
</tbody>
</table>
## Syllabus for Bachelor of Technology
### Computer Engineering

| 2 | **HTML and CSS:**  
Basics of HTML, HTML Tags and attributes, Meta tags, Character entities, hyperlink, lists, tables, images, forms, divs, XHTML  
Basics of CSS, CSS properties for manipulating texts, background, colors, Gradients, Shadow Effects, borders, margins, paddings, transformations, transitions and animations, etc., CSS media queries, CSS box modal and CSS Flex, Positioning systems of CSS | 14 |
|---|---|
| 3 | **JavaScript and jQuery:**  
Basics of JavaScript and Client-side scripting language, JavaScript syntaxes for variables, functions, branches and repetitions, JavaScript alert, prompt and confirm. Objects in JavaScript, Access/Manipulate web browser elements using DOM Structure, forms and validations, JavaScript events,  
Basics of jQuery, jQuery syntaxes, jQuery selectors, events, effects, Access/Manipulate web browser elements using jQuery | 14 |
| 4 | **Bootstrap:**  
Basics of Bootstrap, Bootstrap Layouts, Content, Components and Utilities, Bootstrap Plugin Examples. | 10 |
| | **Total Hours** | 42 |

### References:
1. Black Book, HTML 5, Dreamtech Press  
3. Ralph Moseley and M. T. Savaliya, Developing Web Applications, Wiley-India  
4. Cody Lindley, jQuery Cookbook, O'Reilly Media  
5. Ryan Benedetti, Ronan Cranley, Head First jQuery - A Brain-Friendly Guide, O'Reilly Media

### List of Experiments:
Practical List should be designed in such a way that it covers entire syllabus and results in a semester mini project.

### Instructional Method:

a) The course delivery method will depend upon the requirement of content and need of students. The teacher in addition to conventional teaching method by black board, also need to use ICT tools and facilities.  
b) The internal evaluation will be done on the basis of continuous evaluation of students in the laboratory and class-room.
c) Practical examination will be conducted at the end of semester for evaluation of performance of students in laboratory.

**Supplementary Resources:**

Students will use supplementary resources such as online videos, NPTEL videos, e-courses, Virtual Laboratory.

a) http://nptel.ac.in
b) http://www.w3schools.com/
c) http://getbootstrap.com/
Ssistants listed by course subject code. IT Professional Skills, Internet/Web Technologies, Dental Reception, All PLAR exams, Microsoft Office Efficiency, Office Computer Applications, Systems Analysis & Design, Agile/Scrum, Relational Database, Database Programming, Industry Services. Computing & Academic Studies. Karen Lee. 402-SQP-INFORMATION TECHNOLOGY.pdf. (398k). pooja.khanna@bps.edu.in. Book(IT Level-X)402.pdf. (9684k). pooja.khanna@bps.edu.in, Feb 25, 2019, 1:00 AM. v.1. Intelligent and high-tech labs. Digital libraries. Set studio and post-production suite. The Foundation in Information Technology programme is delivered through engaging lectures and laboratory work which serve to build knowledge and help develop practical skills. Diploma in Information Technology Pass SPM/O-level or its equivalent with minimum of grade C in at least three (3) subjects inclusive of Mathematics, and a pass in English; OR Pass UEC with minimum of grade B in at least three (3) subjects inclusive of Mathematics, and a pass in English.