

## Course: 405-01: Web Designing-2

|                                   |  |
|-----------------------------------|--|
| <b>Course Code</b>                | 405-01   |
| <b>Course Title</b>               | Web Designing-2  |
| <b>Credit</b>                     | 4  |
| <b>Teaching per Week</b>          | 4 Hrs  |
| <b>Minimum weeks per Semester</b> | 15 (Including class work, examination, preparation etc.)   |
| <b>Review / Revision</b>          | June 2021  |
| <b>Purpose of Course</b>          | Web Design requires designers to create graphics, typography as well as images which are used only on the World Wide Web. While creating any design, web designers need to maintain balance between creating a good design as well as the speed and efficiency for the webpage/ website.<br>This course deals with server-side communication.  |
| <b>Course Objective</b>           | To make students aware of web terminology and website designing tools. Student can understand and implement the real functions of website development.   |
| <b>Pre-requisite</b>              | 305-01: Web Designing -1 course of Semester-3.   |
| <b>Course outcome</b>             | <ul style="list-style-type: none"> <li>• Students will be able to create, organize and design websites.</li> <li>• Students gain formal understanding of XML-based technologies which are used in Web-service.</li> <li>• Students will be able to make dynamic changes to a web pages as well as respond to user and browser events through JQuery</li> <li>• Students will be able to learn cross-browser supports via Ajax and Jason</li> <li>• Students will be able to write asynchronous code using various techniques through node.js</li> </ul>  |
| <b>Course Content</b>             | <p><b>Unit-1 : Introduction of XML:</b></p> <p>1.1 Characteristic and Use of XML</p> <p>1.2 XML syntax (Declaration, Tags, elements)</p> <p>1.3 root element, case sensitivity</p> <p>1.4 XML document:</p> <p>    1.4.1 Document Prolog Section</p> <p>    1.4.2 Document element section</p> <p>1.5 XML declaration and rules of declaration.</p> <p><b>Unit-2: jQuery Fundamentals:</b></p> <p>2.1 Introduction and basics:</p> <p>2.1.1 Advantage of jQuery and Syntax</p> <p>2.1.2 jQuery Selectors:</p> <p>2.1.3 jQuery Events (ready(),click(), keypress(),focus(),blur(),change())</p> <p>2.2 jQuery Effects:</p> <p>    Show/Hide, Fade, Slide, Stop, Chaining, Callback</p> <p>2.3 jQuery Manipulation methods:</p> <p>2.3.1 Get/Set methods (text(), attr(), html(), val())</p> <p>2.3.2 Inert methods: (append(), prepend(),text(), before(), after(), wrap())</p> <p>2.3.3 Remove element methods : (remove(),empty(),unwrap())</p> <p>2.3.4 jQuery Get and Set CSS properties using css() method.</p> <p><b>Unit-3: JSON: (JavaScript Object Notation)</b></p> <p>3.2 Concept and Features of JSON</p> <p>3.3 Similarities and difference among JSON and XML</p> |

|                        |  |
|------------------------|--|
|                        | <p>3.4 JSON objects(with string and Numbers))</p> <p>3.5 JSON Arrays and their examples :</p> <p>3.5.1 Array of string, Array of Numbers, Array of Booleans</p> <p>3.5.2 Array of objects, Multi-Dimensional Arrays</p> <p>3.5.3 JSON comments</p> <p><b>Unit-4: AJAX (Asynchronous JavaScript and XML):</b></p> <p>4.1 Fundamentals of AJAX technology:</p> <p>4.1.1 Difference between Synchronous and Asynchronous web application</p> <p>4.1.2 XMLHttpRequest technology</p> <p>4.2 XMLHttpRequest</p> <p>4.2.1 Properties :( onReadyStateChange, readyState, responseText, responseXML)</p> <p>4.2.2 XMLHttpRequest Methods : (Open(), send(), setRequestHeader())</p> <p>4.3 Working of AJAX and its architecture</p> <p><b>Unit-5: Node.js :</b></p> <p>5.1 Concepts, working and Features</p> <p>5.1.1 Downloading Node.js</p> <p>5.2 Setting up Node.js server(HTTP server)</p> <p>5.2.1 Installing on window</p> <p>5.2.2 Components</p> <p>5.2.2.1 Required modules, Create Server(http.createServer())</p> <p>5.2.2.2 Request and response</p> <p>5.3 Built-in Modules</p> <p>5.3.1 require() function</p> <p>5.3.2 User defined module: create and include</p> <p>5.3.3 HTTP module</p> <p>5.4 Node.js as Web-server:</p> <p>5.4.1 createServer() , writeHead() method</p> <p>5.4.2 Reading Query String, Split Query String</p> <p>5.5 File System Module:</p> <p>5.5.1 Read Files (readFile())</p> <p>5.5.2 Create Files(appendFile(),open(),writeFile())</p> <p>5.5.3 Update Files(appendFile(),writeFile())</p> <p>5.5.4 Delete Files(unlink())</p> <p>5.5.5 Rename Files(rename())</p> |
| <b>Reference Books</b> | <ol style="list-style-type: none"> <li>1. JavaScript and JQuery (Interactive Front-End Web Development) by Jon Duckett</li> <li>2. JavaScript and JQuery (The missing manual) by David Sawyer MCFarland</li> <li>3. Essential ASP.NET Web Forms Development Full Stack Programming with C#, SQL, Ajax, and JavaScript Robert E. Beasley, Publisher: Apress</li> <li>4Foundations of Ajax, Ryan Asleson, Schutla, Publisher: Apres</li> <li>5Ajax: The Complete Reference By Thomas Powell, ISBN: 978-0-07-149216-4</li> <li>6Head First Ajax , Author: Rebecca M.Riordan, publisher: O'Reilly</li> <li>7Practical Node.js, Author: Azat Mardan,ISBN:978-1-4842-3038-1, Publisher: Apress</li> <li>8Node.JS Guidebook, BPB Publication, ISBN: 9789387284432, Author: Dhruvi Shah</li> <li>9JavaScript for Modern Web Development, ISBN: 9789389328721, eISBN: 9789389328738, Authors: Abhilasha Sinha, Ranjit Battewad, Alok Ranjan</li> <li>10 Mastering HTML, CSS &amp; Javascript Web Publishing, Authors:by Laura Lemay,Rafe Colburn, BPB Publication</li> </ol>  |

|                             |   |
|-----------------------------|---|
|                             | 11 JavaScript by Example, Author: Elitle Quigley,Publication: Prentice Hall, ISBN: 9780137054893, 9780137054893.<br>12 XML in easy steps, Publication: Tata McGrawHill<br>13 XML crash course, Publisher: Tata McGraw Hill, ISBN: 9780071815161, 9780071815161<br>14 Beginning jQuery: From the Basics of jQuery to Writing your Own Plugins, by Jack Franklin Russ Ferguson,978-1484230268 |
| <b>Teaching Methodology</b> | Class Work, Discussion, Self-Study, Seminars and/or Assignments   |
| <b>Evaluation Method</b>    | 30% Internal assessment.<br>70% External assessment.  |