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| **NAME OF DEPARTMENT:** | | | | | | | | | | | | | | | | | | | | School of Computing | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| **Subject Name:** | | | | | | | | | | Web Development | | | | | | | | | | | | | | | | | | | | | | | | | **Subject Code:** | | | | | | | | | TBC 501 | | |
|  | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | |  | | |
| **Course Name:** | | | | | | | | | | Bachelor of Computer Applications (BCA) | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | |  | | |
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| **1** | **Contact Hours:** | | | | | | | | | | | | 45 | | | |  | | | | | | | | | | | | | | | | | | | **L** | | 3 | | | **T** | | 0 | | **P** | 0 | |
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| **2** | **Examination Duration(Hrs):** | | | | | | | | | | | | | | | | | | | | | |  | **Theory** | | | | | 0 | 3 |  | **Practical** | | | | | 0 | | 0 | |  | | | | | |
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| **3** | **Relative Weightage:** | | | | | | | | | | | | | |  | | | | | **CWE:** | | | | | | | 25 | | **MTE:** | | | 25 | | **ETE:** | | | | 50 | | | |  | | | | |
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| **4** | **Credits:** | | | | | | | 0 | | | 3 | |  | | | | | | | | | | | | |  | | |  | | |  | |  | | | |  | | | |  | | | | |
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| **5** | **Semester:** | | | | | | | | **\*** | | | |  | | |  | | |  | | |  | | |  | | | | | | | | | | | | | | | | | | | | | |
|  |  | | | | | | **Autumn** | | | | | | | **Spring** | | | | | | | **Both** | | | | | | |  | | | | | | | | | | | | | | | | | | |
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| **6** | **Pre-Requisite:** | | | | | | | | | | | | Knowledge of Web Programming. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| **7** | **Subject Area:** | | | | | | | | | | | | Web Programming | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| **8** | **Objective:** | | | | | | | | | | | To familiarize students with advance concepts of web development**.** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| **9** | **Course Outcome:** | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | **CO 1** | | | | | Develop Server side programs using Servlet. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | **CO 2** | | | | | Develop Web Applications using JSP. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | **CO 3** | | | | | Build well-formed XML Document. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | **CO 4** | | | | | Build dynamic web pages using AJAX. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | **CO 5** | | | | | Learn and understand the concept of Web Applications using advance concepts of PHP. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | **CO 6** | | | | | Implement the JSP, Servlet, PHP, and AJAX to solve web development problems. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| **10** | | **Details of the Course:** | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Unit No.** | | | | **CONTENT** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | **CONTACT HOURS** | | | | | | |
| **1** | | | | **Servlets** Introduction of Servlet, Introduction of CGI, Advantages of Servlets over CGI,  Http request, Get VS Post, Web Server Vs Application Server, Servlet’s Life Cycle, Steps to create Servlet Application, How Servlet works, War file, Servlet Request, ServletConfig, ServletContext, GenericServlet, HttpSevlet, Request Dispatcher, Send Redirect, Cookies. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | **9** | | | | | | |
| **2** | | | | **Java Server Pages (JSP)**  Advantages of JSP over Servlet, JSP Lifecycle, How to create and run JSP page, JSP Scripting Elements, Implicit Objects, Directive Elements, Exception Handling in JSP, Action Tags. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | **9** | | | | | | |
| **3** | | | | **XML and AJAX**  Introduction of XML, Features of XML, Advantages and Disadvantages of XML, HTML VS XML, XML Tree, XML DTD, and XML DOM.  What is AJAX, Where it is used, Synchronous VS Asynchronous, XML HttpRequest, How AJAX work, AJAX Request and Response? | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | **9** | | | | | | |
| **4** | | | | **Advance PHP**  Overview, PHP Strings, Math, Form Handling, include vs require, cookie, session, File Handling, and MYSQLi. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | **9** | | | | | | |
| **5** | | | | **Module Design**  Login and Registration Page, Change Password and Forgot Password Page, Log out page, Save data with system date and time, Calculate age as per the given DOB, Authentication as per User Type, Partial Searching, CRUD operations. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | **9** | | | | | | |
|  | | | | **TOTAL** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | **45** | | | | | | |
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| **11** | | **Suggested Books:** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | |
| **Sl. NO.** | | | **NAME OF AUTHORS/BOOKS/PUBLISHERS** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | **YEAR OF PUBLICATION** | | | | | |
| 1. | | | Bryan Basham, Kathy Sierra, Bert Bates / Head First Servlets and JSP 2nd Edition / O'Reilly Media | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2008 | | | | | |
| 2. | | | Sas Jacobs / Beginning XML with DOM and AJAX / Apress | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2006 | | | | | |
| 3. | | | Steven Holzner / AJAX “A Beginners guide” / McGraw-Hill Education | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2008 | | | | | |
| 4. | | | **Luke Welling & Laura Thomson / PHP and MySQL Web Development**4th Edition ***/*** Addison Wesley | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2008 | | | | | |
| 5. | | | Alan Forbes / The Joy of PHP 5th Edition / Plum Island Publishing LLC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2012 | | | | | |