

## WEB TECHNOLOGIES

|   |           |                                 |       |                      |        |
|---|-----------|---------------------------------|-------|----------------------|--------|
| <b>Course Code</b>                      | 19IT2701A | <b>Year</b>                     | IV    | <b>Semester</b>      | I      |
| <b>Course Category</b>                  | IDE-2     | <b>Branch</b>                   | -     | <b>Course Type</b>   | Theory |
| <b>Credits</b>                          | 3         | <b>L-T-P</b>                    | 3-0-0 | <b>Prerequisites</b> | JAVA   |
| <b>Continuous Internal Evaluation :</b> | 30        | <b>Semester End Evaluation:</b> | 70    | <b>Total Marks:</b>  | 100    |

| Course Outcomes   |   | Blooms Taxonomy Level |
|---|---|-----------------------|
| Upon successful completion of the course, the student will be able to |   |                       |
| <b>CO1</b>  | Understand the basic concepts of HTML,CSS,XML,JDBC connectivity, Servlets and JSP | <b>L2</b>             |
| <b>CO2</b>  | use Java script for validation of web pages                                       | <b>L3</b>             |
| <b>CO3</b>  | Analyze the concepts of DOM,JDBC Architecture and life cycles of Servlets and JSP | <b>L4</b>             |
| <b>CO4</b>  | Compare the concepts of HTML and XML, Servlets and JSP                            | <b>L4</b>             |
| <b>CO5</b>  | Develop simple web applications using JDBC, servelet and JSP                      | <b>L6</b>             |

**Contribution of Course Outcomes towards achievement of Program Outcomes & Strength of correlations (3:Substantial, 2: Moderate, 1:Slight)**

|  | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | PSO1 | PSO2 |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|
| <b>CO1</b>                                   |     |     | 2   |     | 2   |     |     |     |     |      |      |      | 2    | 2    |
| <b>CO2</b>                                   |     |     | 2   |     | 2   |     |     |     |     |      |      |      | 2    | 2    |
| <b>CO3</b>                                   |     |     | 2   |     | 2   |     |     |     |     |      |      |      |      |      |
| <b>CO4</b>                                   |     |     | 2   |     | 2   |     |     |     |     |      |      |      |      |      |
| <b>CO5</b>                                   |     |     | 2   | 2   | 2   |     |     |     |     |      |      |      |      |      |
| <b>Average* (Rounded to nearest integer)</b> |     |     | 2   | 2   | 2   |     |     |     |     |      |      |      | 2    | 2    |

## Syllabus

| Unit No | Contents   | Mapped CO |
|---------|--|-----------|
| I       | <b>Introduction to web technologies:</b> History of the web, Overview of HTTP, HTML Introducing HTML document structure, Creating Headings, links, paragraph, images, tables, frames, forms and html controls on a web page  | CO1       |
| II      | <b>Introducing cascading style sheets:</b> Inline, External, Internal, Style class, Multiple styles, Introducing JavaScript , Using Variables, Using Operators, Working with Control Flow statements, Working with functions, Handling Events, Using Arrays, Creating objects in Java Script | CO2       |
| III     | <b>Working with XML:</b> Introduction to XML, XML Basics, XML Technologies, Extensible HTML (XHTML), Java API for XML Processing, Document Object Model (DOM)  | CO1, CO3  |

|    |  |                              |
|----|--|------------------------------|
| IV | <b>Working with database:</b> Getting started with JDBC, Defining ODBC, Introduction to JDBC, Components of JDBC, JDBC Architecture, Types of Drivers, Working with JDBC APIs, Creating a Simple Application, Working with Prepared Statement, Using Callable Statement  | CO1,<br>CO3,<br>CO4,<br>CO5  |
| V  | <b>Working with servlets:</b> Introducing the MVC architecture, Describing Servlets, Understanding Servlets, What are servlets, introducing the Servlet API, Servlet Life Cycle, Developing First Servlet Application<br><b>Working with JSP:</b> Introduction to JSP, Understanding JSP, Describing the JSP Life Cycle, Creating a Simple JSP pages | CO1,<br>CO3,<br>CO4,<br>CO5, |

### Learning Resources

#### Text books

1. Web Technologies, Black Book, Kogent Learning Solutions Inc, Dreamtech Press.
2. JDBC, Servlets, and JSP, New Edition, Santhosh Kumar K, Kogent Learning Solutions Inc, Dreamtech Press.

#### References

1. Web Technologies, Uttam K. Roy, Volume 2 , Oxford University
2. Core Servlets and Java Server Pages Volume 1 CORE TECHNOLOGIES , Marty Hall and Larry Brown Pearson
3. Internet and World Wide Web – How to program, Dietel and Nieto
4. An Introduction to Web Design and Programming –Wang-Thomson
5. Professional Java Server Programming S.Allam Raju and others Apres (dreamtech)
6. Java Server Programming, Ivan Bayross and others, The X Team, SPD
7. Beginning Web Programming-Jon Duckett WROX.
8. Java Server Pages, Pekowsky, Pearson.
9. Java Script, D.Flanagan, O'Reilly, SPD.

#### e-Resources and other Digital Material

1. <http://nptel.ac.in/courses/106105084/13>
2. <http://www.w3schools.com/>
3. <https://www.javatpoint.com/html-tutorial>