

Branch Name :	MCA
Program Code :	CS201
Course Name :	ADVANCED JAVA PROGRAMMING
Course Code :	3CS2010303T
Pre-requisite Course :	Knowledge of core Java Programming

Course Objectives:

- To understand the concepts of Database Programming using JDBC.
- To get a better understanding of developing web-based applications using Servlets & JSP.
- To understand the concept of developing web-based applications using MVC Architecture.

Teaching Scheme (Hours per week)				Evaluation Scheme (Marks)				
Lecture	Tutorial	Practical	Credit	Theory		Practical		Total
				University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	
3	-	-		60	40	-	-	100

Subject Contents			
Sr. No	Topic	Total Hours	Weightage (%)
1	JDBC: Accessing Databases with JDBC, Loading JDBC Driver, Establishing Connection, Creating Statements, Executing SQL and Processing Results of a Query, Using Prepared Statement, Using Callable Statement, Using Database Transactions	10	15
2	Basics of Sevlets, Handling Client Request, Server Response, Request and Response Headers & Basics of Session Management: Servlets: Servlet Basics, Basic Servlet structure, Servlets Generating text/html content, Packaging Servlets, The servlet life-cycle. Client Request & Request Headers: Handling Client Request Form Data, Reading Form Data from Servlets, Handling Client Request, Reading Request Headers, Understanding HTTP/1.1 Request Headers, Changing the page according to how the user got there. Server Response & Response Headers: Generating the Server Response, HTTP Status Codes, Specifying Status Codes, HTTP / 1.1 Status Codes, Using Redirections, HTTP Response Headers, Setting Response Headers from Servlets, Understanding HTTP / 1.1 Response Headers. Session Management: Benefits of Cookies, Problem with Cookies, Deleting Cookies, Sending and Receiving Cookies, Using Cookie Attributes, Differentiating Session Cookies from Persistent Cookies, Using Cookies to Remember User Preferences, Session Tracking, Need for Session Tracking, Session Tracking basics, Session Tracking API.	14	35
3	JSP & JSP Expression Language (EL): JSP: JSP Basics, JSP Directives, Using JSP Scripting Elements, Using JSP Standard Action, JSP implicit objects/Predefined Variables and their scope JSP Expression Language (EL): JSP Expression Language, Accessing Scoped Variables, Bean Properties, Collections and Implicit Objects Using EL, Using EL Operators	14	35
4	Introduction to Spring Framework: Advantages of Spring Framework, Dependency Injection and Inversion of Control, Modules, Usage scenarios	10	15

Text Books: Marty Hall, Larry Brown, “Core Servlets and JavaServer Pages Volume – 1”, Pearson Education, 2nd Edition. (2004)

Web Resources:

[1. Introduction to Spring Framework](#)

[Spring Example - javatpoint](#)

Reference Books:

1. Ivan Bayross, “Web Enabled Commercial Application Development Using HTML, DHTML
2. Subrahmanyam Allamaraju, “Professional Java Server Programming J2EE 1.3 Edition”, Apress (2007).
3. Marty Hall, Larry Brown, Yaakov Chaikin, “Core Servlets and Javasever Pages Volume – 2”, Pearson Education, 2nd ed.(2004)

Course Learning Outcomes (CLO): On completion of this course, the students will be able to:

CLO	Description	Bloom’s Taxonomy Level
CLO1	Create Web applications using Servlets and JSP.	6. Creating
CLO2	Fetch data from a database server and use it in a web application.	2. Understanding 4. Analyze 3. Applying
CLO3	Use EL in the JSP page.	4. Analyze 3. Applying
CLO4	Learn to access database through Java programs, using Java Database Connectivity (JDBC)	2. Understanding 3. Applying
CLO5	Apply the concepts of server side technologies for dynamic web applications	5. Evaluate 3. Applying
CLO6	Create web applications by following MVC architecture.	1. Remembering 6. Creating

Mapping of CLOs with POs & PSOs

Course Learning Outcomes	Program Outcomes (POs)												Program Specific Outcomes(PSOs)	
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CLO1		H	H	M	H		L					M	H	H
CLO2		H	H	M	M	L		M		H			H	M
CLO3					M	H		M					H	M
CLO4		M	M	M		M		M	M					M
CLO5		H	H	M	H	M	H	M	H					
CLO6		H	H		H			M			L		M	H

H: High, M: Medium, L: Low