

Branch Name:	Information and Communication Technology
Program Code:	ET107
Semester/Year:	Semester VI/ Third Year
Course Name:	Advance Java Programming
Course Code:	2ET1070602T
Pre-requisite:	Basic knowledge of Object-Oriented Programming Concepts.

Course Objectives:

1. The core objective of this course is to make the students aware about developing multitier and Web-based applications Using Java Technology.
2. This course aims to present JDBC Programming, Java Servlet, Java sever Pages, Java Server Faces, Hibernate and Spring MVC in Application development.
3. This course shall act as platforms for the students wishing to carry out further development in Web Application Development.

Teaching and Examination Scheme:

Credit	Teaching Scheme Hours per week				Evaluation Scheme (Marks)								
					Theory (Marks)				Practical (Marks)				Total (Marks)
	L	T	P	Total	SEE		CCA		SEE		CCA		
					Min.	Max	Min.	Max.	Min.	Max.	Min	Max.	
3	3	-	-	3	24	60	16	40	-	-	-	-	100

Subject Contents:

Sr.No	Topic	Total Hours	Weightage (%)
1.	Introduction to Web Application Enterprise Application and Architecture, Exploring HTTP Protocol, component and Structure of Web Application, Describing Web Containers.	3	5
2.	JDBC Programming Introduction to JDBC, JDBC Drivers, Overview of JDBC Process, SQL Exception Class, SQL Warning Class, The Statement Interface, Prepared Statement, Callable Statement, Result Set Interface, Updatable Result Sets, Meta Data, Transaction Management.	7	15
3.	Servlet Programming Introduction, Servlet API and Interface, Generic Servlet, HTTP Servlet, Servlet Lifecycle, Servlet Container, Servlet Request, Servlet Collaboration, Servlet Context, Session Management, The Filter API: Filter, Filter Chain, Filter Config.	8	20
4.	Java Server Pages Architecture Of JSP Page, JSP page life cycle, JSPelements, JSP Expression Language, Tag Extensions, Tag Extension API,JSTL, Core	8	20

	Tag library, overview of XML Tag library, SQL Tag library and Functions Tag library.		
5.	Java Server Faces Overview of JSF, Features of JSF, JSF Architecture, JSF request processing Life cycle, JSF Tag Library, JSF Standard UI Component, JSF Converter Tag, JSF Validation Tag.	7	15
6.	Hibernate Introduction to Hibernate, Hibernate Architecture, Hibernate Query Language, Understanding Hibernate O/R Mapping. Working with Hibernate	7	15
7.	Spring WEB MVC Introduction to Spring, Spring Web MVC Framework Architecture, and Aspect Oriented Programming with Spring, Managing Transaction, and Spring Form tag Library.	7	10

List of Reference Books:

1. Complete Reference J2EE by James Keogh McGraw publication, 6 September 2002
2. Core Java, Volume II: Advanced Features by Cay Horstmann and Gary Cornell Pearson Publication, 22 November 2004
3. J2EE Unleashed by Joseph J. Bambara, BPB publications, 5 October 2001
4. Professional Java Server Programming by Subrahmanyam Allamaraju, Cedric Buest Wiley Publication, 1 January 2007
5. Black Book “Java server programming”, Dream Tech Publishers, 2008

List of Open Source Software/learning website:

1. <http://williamstallings.com/DataComm/>

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

CLO	Description	Bloom's Taxonomy Level
CLO1	Implement web-based applications using features of HTML and XML	4Analyze 2Understanding
CLO2	Identify reusable component for Graphical User Interface applications	2Understanding
CLO3	Apply the concepts of server side technologies for dynamic web applications	4Analyze
CLO4	Implement the web based applications using effective data base access with rich client interaction	2Understanding

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	PSO3	PSO4
CLO1	H	L	L	M	L	M			L				L	L	M	H
CLO2		L	M	H	L	L					L	L	M	L	M	M
CLO3	L	M	M	M	M	H		M		L			M	L	H	H
CLO4	M	L	M	L	M	H		M	L				M	L	H	H

H:High, M:Medium, L:Low