GANPAT UNIVERSITY

FACULTY OF ENGINEERING& TECHNOLOGY

Programme	Bachelor of Technology				Branch/Spec.	Computer Engineering/Information Technology			
Semester	V				Version	2.0.0.0			
Effective from Academic Year			2020-21		Effective for the batch Admitted in				July 2018
Subject code	2CEIT5PE1		Subject Name		Advanced Java				
Teaching scheme					Examination scheme (Marks)				
(Per week)	Lecture (DT)		Practical(Lab.)		Total		CE	SEE	Total
	L	TU	P	TW					
Credit	3	0	1	-	4	Theory	40	60	100
Hours	3	0	2	-	5	Practical	30	20	50

Pre-requisites:

Object Oriented Programming

Objectives of the course:

1. Acquire knowledge on the advanced concepts and practices in a field of Java EE to develop enterprise level applications.
2. Develop data driven applications to manage data and processes over the network using JDBC and database framework.
3. Develop GUI applications, multi-tier web applications and enterprise applications using Java EE technologies.
4. Develop Java applications using web MVC framework.

Theory Syllabus

Unit	Content	Hrs
1	**Introduction to Java EE Platform and Architecture:** Java EE Platform, Enterprise Application and Architecture, Java EE Containers and Components, Java EE Technologies, Java EE Application Deployment	03
2	**JavaDatabase Connectivity(JDBC):** Introduction, JDBC Architecture: API and Drivers, Types of JDBC Statements,Types of Result sets, Batch Processing, Transactions, JDBC Exception Types, Metadata	07
3	**SwingProgramming:** Introduction, Limitations of AWT, Swing Components and Containers, Look and Feel for Swing Components, MVC Architecture	04
4	**Servlet:** Introduction, Servlet API and Interface, Generic Servlet, HTTP Servlet, Servlet Lifecycle, Servlet Container, Servlet Request, Servlet Collaboration, Servlet Context, Session Management	07
5	**JSP:** Introduction, Advantages of JSP, Working and Lifecycle of JSP, Directives, Scripting elements, Action Elements, Implicit Objects, Java Beans, Various scope in JSP, JSTL	07
6	**Java Mail:** Overview, Mail protocols, Java Mail API, Java Mail Exception, Sending and Receiving Mail	02
7	**Hibernate:** Introduction to JPA, Entities, Entity Relationships,JPA - ORM Components,Entity Manager, Introduction to Hibernate, Hibernate Architecture, Hibernate Mapping Types, Hibernate Configuration, Hibernate Sessions, Persistent Class & Mapping Files, Hibernate O/R Mapping,Hibernate Annotations, Hibernate Query Language	06
8	**Java Web Frameworks- Spring MVC:** Overview of spring, Spring architecture, Aspect – oriented spring, managing database,	06

	Managing transaction	
9	**Java Server Faces:** Introduction to JSF, JSF request processing life cycle, JSF Facelets Tag, JSF Convertor Tag, JSF Validation Tag, JSF Event handling and database access	03
Practical Content		
Experiments/Practical/Simulations would be carried out based on syllabus.		
Text Books		
1	J2EE Unleashed by Joseph J. Bambara, BPB publications	
2	Java Server Programming Java EE5 Black Book, Dreamtech Press	
Reference Books		
1	Professional Java Server Programming Volume I and II, Wrox Publication	
2	The complete Reference J2EE by Jim Keogh,Mcgraw Hill Education Pvt. Ltd	
3	Head first Servlets and JSPs,byBryan Basham, Kathy Sierra, Bert Bates,O'Rilley Media	
4	Professional Java Server Programming: J2EE by Allamaraju, Shroff Publication	
ICT/MOOCs Reference		
1	https://www.udemy.com/spring-hibernate-tutorial/	
2	https://www.udemy.com/jsp-servlet-free-course/	
Course Outcomes:		

After successful completion of this course, student will be able to

1. Develop event driven programs using graphical user interface components.
2. Develop database driven java programs using JDBC.
3. Develop web applications using Servlets, Java Server Pages and JDBC.
4. Develop web applications using Hibernate framework.
5. Develop web applications using Spring MVC framework.