

GANPAT UNIVERSITY

FACULTY OF ENGINEERING AND TECHNOLOGY

Programme	Bachelor of Technology	Branch/Spec.	Information and Communication Technology						
Semester	VI	Version	1.0.0.0						
Effective from Academic Year		2019-20	Effective for the batch Admitted in		2017-18				
Subject code	2ICT60E1	Subject Name	Advanced JAVA						
Teaching scheme				Examination scheme (Marks)					
(Per week)	Lecture (DT)		Practical (Lab)		Total	(Per week)	Lecture	Practical	Total
	L	TU	P	TW					
Credit	3	--	1	--	4	Theory	40	60	100
Hours	3	--	2	--	5	Practical	30	20	50

Pre-requisites:

Object Oriented Programming

Learning Outcome:

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

- Understand the Client-Server architecture for Web Application Development, which core Java doesn't support.
- Develop, build & deploy Web-based applications online.
- Develop web applications using Servlets, Java Server Pages and JDBC.
- Work with Web and Application Servers for integration to application.
- Develop Advance Java Framework like spring, JSF, struts etc.

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.	4
2	Java Database Connectivity (JDBC): Introduction, JDBC Architecture: API and Drivers, Types of JDBC Statements, Types of Result sets, Batch Processing, Transactions, JDBC Exception Types, Metadata.	6
3	Servlet: Introduction, Servlet API and Interface, Generic Servlet, HTTP Servlet, Servlet Lifecycle, Servlet Container, Servlet Request, Servlet Collaboration, Servlet Context, Session Management.	7
4	JSP: Introduction, Advantages of JSP, Working and Lifecycles of JSP, Directives, Scripting elements, Action Elements, Implicit Objects, Java Beans, Various scope in JSP, JSTL.	7
5	Java Server Faces 2.0 : Introduction to JSF, JSF request processing Life cycle, JSF Expression Language, JSF Standard Component, JSF Facelets Tag, JSF Converter Tag, JSF Validation Tag, JSF Event Handling and Database Access, JSF Libraries: Prime Faces.	5
6	Java Web Frameworks: Spring MVC : Overview of Spring, Spring Architecture, bean life cycle, XML Configuration on Spring, Aspect – oriented Spring, Managing Database, and Managing Transaction.	6
7	Java Framework: Struts: Introduction to struts2 framework, Core Components, Struts2 Architecture, Struts 2 Validation tags.	4
8	Hibernate: Introduction, Hibernate Architecture, Hibernate Mapping Types, Hibernate Configuration, Hibernate	6

	Sessions, Persistent Class & Mapping Files, Hibernate O/R Mapping, Hibernate Annotations, Hibernate Query Language.	
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Practical content:

Experiments/Practicals/Simulations would be carried out based on syllabus.

Text Book:

1	J2EE Unleashed by Joseph J. Bambara, BPB publications.
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2	Java Server Programming Java EE5 Black Book, Dreamtech Press.
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Reference Books:

1	Professional Java Server Programming Volume I and II, Wrox Publication.
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2	The complete Reference J2EE by Jim Keogh, McGraw Hill Education Pvt. Ltd.
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3	Head first Servlets and JSPs, by Bryan Basham, Kathy Sierra, Bert Bates, O'Rilley Media.
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4	Professional Java Server Programming: J2EE 1.4 edition by Allamaraju, Shroff Publication.
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Mooc:

<https://nptel.ac.in/courses/106106147/>

Course Outcomes:

COs	Description
CO1	Understand the object oriented programming concepts and implement in java.
CO2	Comprehend building blocks of OOPs language, inheritance, package and interfaces.
CO3	Implement multithreading in object oriented programs.
CO4	Prepare UML diagrams for software system

Mapping of CO and PO:

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1	0	2	1	1	2	3	1	0	1	2	2
CO2	1	1	3	3	2	2	1	0	1	2	1	1
CO3	2	1	3	3	3	2	1	1	2	1	1	2
CO4	3	2	1	0	1	1	0	2	2	3	2	3