



C.U.SHAH UNIVERSITY – WADHWANCITY

FACULTY OF TECHNOLOGY AND ENGINEERING

DEPARTMENT OF COMPUTER ENGINEERING

B. TECH. SEMESTER: - IV

SUBJECT NAME: - Object oriented Programming with Java(OPJ) SUBJECT CODE: - 4TE04OPJ1

Teaching & Evaluation Scheme:-

Subject Code	Subject Name	Teaching Scheme (Hours)				Credits	Evaluation Scheme							
		Th	Tu	Pr	Total		Theory				Practical (Marks)		Total	
							Sessional Exam		University Exam		Internal	University		
							Marks	Hours	Marks	Hours	Pr/Viva	TW		Pr
4TE04OPJ1	Object Oriented Programming with Java	3	0	2	5	4	30	1.5	70	3.0	30	20	-	150

Objectives:

- To provide understanding of Object Oriented Concept of JAVA Programming Language.
- To provide understanding of programming language to create Applications.

Prerequisites:

- Basic concepts of object oriented programming.

Course outline:

Sr. No.	Course Contents	Total Hours
1	Introduction to Java: Basics of Java programming, Data types, Variables, Operators, Control structures including selection, Looping, Java methods, Overloading, Math class, Arrays in java.	06
2	Objects and Classes: Basics of objects and classes in java, Constructors, Finalize () Method, Visibility modifiers, Methods and objects.	04
3	Inheritance and Polymorphism: Inheritance in java, Super and sub-class, Method Overriding, Object class, Polymorphism, Dynamic binding, Casting objects, Instance of operator, Abstract class, Interface in java, Package in java, UTIL package, Collection.	12
4	Thread in java: Thread life cycle and methods, Runnable interface, Thread synchronization.	04

5.	Exception Handling: Exception handling with try-catch-finally, throws, throw.	02
6	Event Handling: Delegation Event Model, event Source, Event Class, Event Listener, Adapter Class, Inner Class, Anonymous Class.	04
7	GUI Programming: Applet and its life cycle ,Panels, Frames, Layout Managers: Flow Layout, Border Layout, Grid Layout, GUI components like Buttons, Check Boxes, Radio Buttons, Labels, Text Fields, Text Areas, Combo Boxes, Lists, Scroll Bars, Sliders, Windows, Menus, Dialog Box.	12

Learning Outcomes:

1. Students will have better understanding of object oriented programming and how to program in JAVA.
2. Students will be able to create different Application using JAVA.

Books Recommended:

1. Head First Java by **Katy Sierra & Bert Bates**, O'Reilly, 1st edition, 2004.
2. The Complete Reference, Java 2 by **Herbert Schild**, Tata Mc Graw Hill, 7th edition, 2006.
3. Introduction to Java Programming Comprehensive Version by **Daniel Liang**, 9th edition, Pearson education.
4. Big Java by **Horstmann**, Wiley-India, 3rd edition, 2007.

Web Resources:

1. www.oracle.com/java