GUJARAT TECHNOLOGICAL UNIVERSITY
M.E   Semester: 2
Computer Engineering

Subject Name   Object Oriented Programming

Sr.No	Course content
1.	Introduction : Approaches to Software Design, Evolution of the Object Model, Benefits of Object Programming; Object Model: Objects, Classes, Subclassing and Inheritance, Polymorphism
2.	Object Programming in Windowed Environments: Benefits of OOP in Windowed Application Environments, Application Frameworks and Class Libraries
3.	Overview of Java : Data types : Operators and Control statements.
4.	Classes and Inheritance: Methods; contractors; Garbage collection; Access control; Multilevel hierarchy
5.	Packages and Interfaces : Access protections : Importing packages; Implementation and applications of Interfaces.
6.	Exception handling : Fundamentals : Exception types; try, catch, throw, throws and finally; Nested try statements and propagation of thrown exception
7.	Multithreaded programming : Thread model; Thread priorities; Synchronization and interthread communication
8.	I/O and Applets : Streams; File I/O; Applets; Parameter passing to applets
9.	Event Handling : Event model; Event Classes; Event listeners interfaces.
10.	Abstract Window Toolkit : AWT Classes; Component; Container; Panel; Window; FrameCanvas; Graphics; AWT controls; Layout Managers; Buttons; Check Boxes; Choices; Lists; Scroll Bars; Text fields; Text Areas; Menus; Dialog Boxes; GUI bases programs

11.	Java Library : String handling; Exploring java language; java io; java.util
12.	From Plan to Product: Developing a Plan, Identifying Software Requirements, Designing a General Class Structure, Building a General Application Framework, Implementing Features, Final Polishing
13.	Tools and Methodologies: Analysis and Design Methodologies, Notations
14.	Object Programming for the Web: How Web Applications Work, Web Objects, Building a Simple Object-Oriented Program

Reference Books:

1. The Complete Reference Java 2, Seventh Edition - Patrik Naughton & Herbert Schidt , Tata McGraw Hill Publication
2. Just Java, Second Edition – Peter Vander Linden, Sun Soft Press
3. Special Edition Using Java 2 Platform – Weber, Practice Hall of India
4. Java How to Program, Third Edition – Detiel and Detiel, Peason Education Asia