

502 : Core Java**Theory Credits:4****Lab Credits:1****Objectives:**

Understand the basics of the Java language and how it relates to OO programming and the Object Model. Understand not only the fundamentals of the Java language, but also its importance, uses, strengths and weaknesses. Learn to use Java multi-threading and exception handling features. Understand and use classes, inheritance and polymorphism. Develop GUI applications using AWT and Swing. Use Java for client-side applets, networking and communication applications. Use the JDBC API for database access.

Sr. No.	Topic Name	No. Of Hrs
01.	Object Oriented Programming – Basics	02
	Overview of programming paradigms, Structure and classes, Encapsulation	
	Polymorphism, Inheritance.	
02.	Introduction of Java Programming	03
	Features of Java as programming language/Platform, JDK Environment and Tools	
03.	Java - Programming Fundamentals	08
	Structure of Java program, Data types, variables, operators, keywords, Naming	
	Conventions, Flow control- Decision, Iteration, Arrays	
04.	Classes and Objects	08
	Class members, access control, Objects, Constructors, Finalization, Interface-	
	need/function, Abstract classes, Abstract Methods, Inner Class, Anonymous class	
05.	Packages	06
	Creating and importing packages	
06.	GUI Programming	20

	Java AWT Components: Window, Frame, panel, Dialog, File Dialog, Label, Button,	
	List, Check Box, Text Components, Choice, Menu Components, Layout Manager:	
	Border, Flow, Grid, Event Model: Listeners/Adapters	
07.	Exception Handling	06
	Exceptions and types, try catch, finally, throw, Custom exceptions.	
08.	Input-output Streams (package java.io)	07
	Classes: BufferedReader, BufferedWriter, FileReader, FileWriter, File	
	Total	60

Reference Books

Complete Reference Java 2 by Herbitt Schield

The Java Tutorial by M. Compione and K. Walrath

Programming with Java, A Primer by E. Balaguruswamy

Java Practicals:

30 hrs

Every student is required to perform minimum 7 experiments