

University of Pune

M C A (Commerce): 301 Core Java

Course Objective: This course enables students to understand programming concept and its use in Software development.

Ch.No	Topic	No. Of Lect	Reference Book
1.	1. Introduction to Java 1.1 Features of java 1.2 JDK Environment & tools like(java, javac, appletviewer, javadoc, jdb)	2	2
2.	2. Java Programming Fundamental 2.1 Structure of java program 2.2 Data types 2.3 Variables 2.4 Operators 2.5 Keywords 2.6 Naming Convention 2.7 Decision Making (if, switch) 2.8 Looping(for, while) 2.9 Type Casting 2.10 Java Built in packages	3	1,2
3	3. Collection Framework 3.1 Collection Interface List , Sets 3.2 Sorted set 3.3 Collection classes 3.4 Linked list 3.5 Array list 3.6 Vectors 3.7 HashSet 3.8 TreeSet 3.9 Using Iterators and Enumerations 3.10 Working with maps 3.11 Map interfaces 3.12 Map classes	8	2,3
4	4. Classes and Objects 4.1 Creating Classes and objects 4.2 Memory allocation for objects	6	1,2,3

	4.3 Constructor 4.4 Implementation of Inheritance Simple, Multilevel, Hierarchical 4.5 Implementation of Polymorphism Method Overloading, Method Overriding 4.6 Nested and Inner classes 4.7 Byte Stream classes 4.8 character Stream classes		
5	5.Arrays String and Vector 5.1 Arrays Creating an array 5.2 Types of Array One Dimensional arrays Two Dimensional array 5.3 Strings 5.4 String – Arrays ,String Methods, StringBuffer class, Vectors 5.5 Wrapper classes	4	1,2,3
6	6.Abstract Class , Interface and Packages 6.1 Modifiers and Access Control Default, public private protected 6.2 Abstract classes and methods 6.3 Interfaces 6.4 Packages <input type="checkbox"/> Packages Concept Creating user defined packages	7	1,2,3
7	7.Exception Handling 7.1 Exception types 7.2 Using try catch and Multiple catch 7.3 Nested try 7.4 throw , throws and finally 7.5 Creating User defined Exceptions	4	1,3
8	8.Applet Programming 8.1 Introduction 8.2 Types applet 8.3 Applet Life cycle 8.4 Creating applet 8.5 Applet tag	5	1,3

9	9. AWT , Swing and Event Handling 9.1 Components used in AWT 9.2 AWT controls and Layout managers 9.3 Listeners 9.4 Adapter classes 9.5 Introduction to Swing 9.6 Components and containers 9.7 Event handling in swing	7	1,3
---	---	---	-----

Reference Books:

- 1. Complete Reference – Herbert Schildt**
- 2. Programming in Java – Balguruswami**
- 3. Programming in Java – Black Book Series.**