Course Code	Course Title	C	H	I	E	T
17U6MAC4	Ancillary CCM – IV: Fundamentals of JAVA Programming	2	4	25	75	100

Learning Objectives
- To enable the students to have a good foundation and practical knowledge on Programming with JAVA.
- To understand the basics of OOP & Object oriented approach to design software.

Learning Outcomes

On satisfying the requirement of this course, students will be
- Able to understand basic concepts of Java such as objects, classes, operators, packages & various keywords.
- Able to design the applications of Java.

Unit I Java evolution

Java history – Java features – Java and internet – Web browsers –Java environment – Overview of Java language: Java program structure – Java statements – Implementing a Java program – Java virtual machine – Command line arguments.

Unit II Java fundamentals

Constants, variables and data types – Operations and expressions – Decision making and branching – Decision making and looping.

Unit III Classes, objects and methods

Defining a class, adding variables – Adding methods – Constructors – Method overloading inheritance – Overriding methods, arrays, strings and vectors – Creating arrays – Strings – vectors – Wrapper classes.

Unit IV Interfaces

Defining interfaces – External interfaces – Implementing interfaces, packages: creating packages – Using a package – Adding a class to a package.

Unit V Multithreaded programming

Multithreaded programming – Creating threads – Extending the thread – Stopping and blocking a thread – Life cycle of a thread.

Text Book:

E. Balagurusamy, Programming with JAVA – A Primer, 2nd Edition 2000, Tata McGraw – Hill Publication.

Chapters: 2(2.1,2.2,2.4,2.9), 3(3.5,3.7,3.8,3.9,3.10),4(4.2–4.4),5(5.2–5.9),6(6.2 –6.8),7(7.2–7.4),8(8.2–8.4,8.7, 8.8, 8.11,8.12),9(9.2–9.7),10(10.2–10.4),11(11.5 –11.8),12(12.2–12.5).

Reference Books:
1. C. Xavier, JAVA Programming with JAVA 2, 2ndReprint 2003, Scitech Publication.
2. Patrick Naughton, Herbert Schildt, The complete reference, 3rd Edition1997, Obsborne Publishing.