

COURSE CODE	COURSE TITLE	L	T	P	C
1151CS103	PROGRAMMING IN JAVA	3	0	0	3

**Course Category:** Program Core

**A. Preamble:**

Most of the software need to develop runs in cross platform. Java is the one of the pioneer software development tool developed used for cross platform development software. From the system towards the handheld devices all place Java become one of the most dominant software. This course provides a basic concept about Object Oriented Programming, Database connectivity, Networking and finally provides programming skills in java. After successful completion of this course learners can able to develop software modules for real world problem.

**B. Pre-requisites:**

SI No	Course Code	Course Name
1	1150CS201	Problem Solving using C

**C. Related Courses:**

SI No	Course Code	Course Name
1	1151CS201	<a href="#">Mobile Application Development</a>
2	1151CS202	<a href="#">Internet Programming</a>

**D. Course Outcomes:**

Students undergoing this course are able to:

CO Nos	Course Outcomes	Knowledge Level (Based on revised Bloom's Taxonomy)
CO1	Design and implement basic data types and control flow constructs using J2SE or other Integrated Development Environments.	K2
CO2	Write, compile and execute Java programs using object oriented class structures with parameters, constructors, and utility and calculations methods, including inheritance, test classes and exception handling.	K2
CO3	Demonstrate multitasking using Threads.	K3
CO4	Develop simple applications using GUIs and event driven programming	K2
CO5	Develop applets for inclusion in web pages; applets to access enterprise data bases in robust, enterprise applications	K3

**E. Correlation of COs with POs :**

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	M											
CO2	M		M	M								
CO3	M											
CO4	M		M	L	M							
CO5	M		M	M	M							

H- High; M-Medium; L-Low

## **F. Course content:**

### **UNIT I: INTRODUCTION TO JAVA**

**L- 9**

Basic concepts of object oriented programming, Java vs C++, Tokens, Keywords, Identifiers, Data types, Type Conversions and Casting, Arrays and Operators, Control statements, Class fundamentals, constructors, this keyword, garbage Collection and finalize methods, overloading methods

### **UNIT II: INHERITANCE AND PACKAGE**

**L- 9**

Nested and Inner Classes, Basics of Inheritance, Super keyword, Multilevel Hierarchy, Invoking Constructors, Method overriding, Abstract Classes, Using Final with Inheritance, Packages, Interfaces, String Operations.

### **UNIT III: EXCEPTIONS AND THREADS**

**L- 9**

Exception Types, Uncaught Exceptions, Using Try Catch, Multiple Catch, Nested Try and throw, Throws, finally, Threads.

### **UNIT IV: I/O STREAMS AND APPLET**

**L- 9**

Character Streams, Stream I/O, Serialization, Files, Applet Architecture, Programming using Applet, Event Handling-Delegation event Model-Event Classes-Event Listener Interface

### **UNIT V: JAVA NETWORKING AND JDBC**

**L- 9**

InetAddress –TCP/IP Client socket – URL Connection –TCP/IP Server - socket – Datagram, JDBC-JDBC Drivers, Database connectivity in Java.

**TOTAL : 45 Periods**

## **G. Learning Resources**

### **i. Text Books**

1. E. Balaguruswamy, *Programming in java*, Fourth Edition, TMH, 2010.
2. Patric Naughton, Herbert Schildt, *The Complete Reference “Java 2”*, Ninth edition Tata McGraw Hills, 2014.

### **ii. Reference Books**

1. H.M. Deitel and P.J. Deitel – **“Java How to Program”** Pearson Prentice Hall Sixth Edition, 2011.
2. Sachin malhotra, *“Programming in JAVA”*, Oxford University Press, 2011.
3. Maydene Fisher, Jonathan Ellis, Jonathan Bruce, *“JDBC Database access with java”* Addison-Wesley, Third Edition 2003
4. Bruce Eckel – **“Thinking in Java”** Pearson Prentice Hall Third Edition-2006

### **iii. Online Resources**

1. [docs.oracle.com/javase/6/tutorial/doc/girgm.html](http://docs.oracle.com/javase/6/tutorial/doc/girgm.html)
2. [www.webreference.com/programming/java.html](http://www.webreference.com/programming/java.html)
3. [www.apl.jhu.edu/~hall/java/Documentation.html](http://www.apl.jhu.edu/~hall/java/Documentation.html)