

With effect from the A.Y 2018-19

**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING  
SYLLABUS FOR B.E VI SEMESTER**

**INTRODUCTION TO JAVA PROGRAMMING (Open elective-VII)  
(for other Departments)**

Instruction: 2 Hrs /week	SEE Marks :70	Course Code : <b>OE520CS</b>
Credits : 2	CIE Marks: 30	Duration of SEE : 3 Hrs

<b>Course Objectives</b>	<b>Course Outcomes</b>
Students should be able to	At the end of the course, Students will be able to
<ul style="list-style-type: none"><li>Apply object oriented principles for developing an application using Java constructs</li><li>Design GUI using existing Java classes and interfaces</li></ul>	<ol style="list-style-type: none"><li>Apply the object oriented programming (OOP) concepts to design an application.</li><li>Employ runtime error handling, concurrent programming practices to develop a parallel processing application</li><li>Read and write the IO operations using console and files streams</li><li>Design dynamic GUI for a java application using AWT classes</li></ol>

**UNIT – I**

**Java Programming Fundamentals:** Introduction, Overview of Java, Data types, Variables and Arrays, Operators, Control Statements, Classes and Methods, Garbage Collection, this keyword, final, Inheritance, Method Overriding.

**UNIT – II**

Abstract class, Nested class, Interface, Package, Exception Handling, Multithreaded Programming, String Handling.

**UNIT - III**

**Util:** StringTokenizer, Date, Calendar, Random, Timer, Observable

**IO:** Java I/O Classes and Interfaces, Files and Directories, Byte and Character Streams

**UNIT – IV**

**GUI and event Programming:** Applet Class, Applet architecture, The Delegation Event Model, Event Classes, Source of Events, Events Listener Interfaces, AWT: Classes, Working with Graphics, Frames, Menu, Layout Managers.

**Suggested Books:**

1. Herbert Schildt, *The Complete Reference Java*, 7<sup>th</sup> Edition, Tata McGraw Hill 2005.

**Reference Books:**

1. P. Radha Krishna, *Object Oriented Programming through Java*, Universities Press, 2007.

2. Sachin Malhotra, Saurabh Choudhary, *Programming in Java*, 2<sup>nd</sup> Edition, Oxford Press, 2014.

**Online Resources:**

<https://docs.oracle.com/javase/tutorial/java>