Semester	**3**
Paper Code	**S2CS230311P**
Course	**SKILL**
Paper Title	**JAVA**
No. of Credits	**3**
Theory / Practical / Composite	**Practical**
Minimum No. of preparatory hours per week a student has to devote	5
Number of Modules	One
Syllabus	1. Introduction to Java - Java Architecture and Features, Understanding the semantic and syntax differences between C++ and Java, Compiling and Executing a Java Program, Variables, Constants, Keywords Data Types, Operators and Expressions, Control statements (decision making and iterative)

2. Java Methods - Defining, Scope, Passing and Returning Arguments

3. Arrays - Creating and Using Arrays (One Dimension and Multi-dimensional), Referencing Arrays Dynamically

4. Strings - The Java String class, Creating and Using String Objects, Manipulating Strings, String Immutability and Equality

5. Simple I/O using IO package and the Scanner class, Byte and Character streams, Reading/Writing from console and files

6. Inheritance - Single Level and Multilevel, Method Overriding, Dynamic Method Dispatch, Abstract Classes and Methods, Interfaces and Packages, Package and Class Visibility

7. Exception Handling – Concepts and types, building own exception classes

8. Multithreading - The Thread class and Runnable interface, creating single and multiple threads, Thread prioritization |
| Learning Outcomes | On completion of the course, the students will be able to:
1. Understand Java Fundamentals
2. Work with Java Methods and Arrays
3. Implement Strings and I/O Handling
4. Understand Inheritance, Exceptions, and Multithreading
5. Program with Interfaces, Packages, and Visibility |

Reading/Reference Lists	1. "Head First Java", Orielly Media Inc. 2nd Edition, 2005. 2. E. Balaguruswamy, "Programming with Java", 4th Edition, McGraw Hill, 2009. 3. Paul Deitel, Harvey Deitel, "Java: How to Program", 10th Edition, Prentice Hall, 2011. 4. Herbert Schildt, "Java The Complete Reference", Oracle Press, Seventh Edition, 2017.	
Evaluation	PRACTICAL EXAMINATION	