



Sub Committee for Curriculum Development

Course Name: Object Oriented Programming

(UG/PG): UG

Number of Credits: 4

Level: 03

Learning Objective(s): The objective of this course is to interpret core concepts object oriented programming using Java as a programming language. The course will also help students to analyze and construct well designed and effective applications using Java.

Pedagogy:

Lectures
Hands On Lab Sessions
Presentation
Class room discussion

Pre-requisites:

Understanding of Concepts of Object Oriented Programming
Basics of Programming fundamentals like algorithms and flowchart

Course Outline:

Sr. No	Topic	Hours
1	Introduction: Features of Java, Java Virtual Machine(JVM) JDK Environment Java Class and Object Concepts	2
2	Basics of Java: Writing Simple Java Classes, Methods Java Code Naming Conventions Java Primitive and Non primitive Data types Java Reference Data types Java Keywords Operators in Java – Arithmetic, Relational, Logical, Ternary, Bitwise Statements in Java Conditional Statements-if, if-else, if-elseif-else ,switch Looping: while, do-while, for,f or-each Jumping Statements-break, continue Arrays in Java,Array of Objects,Multi-dimensional Arrays	6

3	"this" keyword "static" Keyword Method Overloading Concept of Constructor, Types of Constructor , Constructor overloading, Constructor Nesting Garbage Collection and Finalization	7
4	Inheritance Types of Inheritance "super" keyword in Java Constructor Chaining	6
5	Polymorphism-Method Overriding Dynamic Method Dispatch "final" keyword in Java	5
6	Abstract Classes, Concept of Interfaces, Implementing interfaces, Extending Interfaces	5
7	Access Control Packages in Java Creating package hierarchy in Java	6
8	String and StringBuffer, Concept of Mutable and Immutable behavior Objects in Java Wrapper classes	3
9	Exception Handling Exceptions and types, try catch, finally, throw, throws, Custom exceptions.	5
10	Concept of stream in Java Byte Streams and Character Streams Serialization and De-serialization java.nio package: Buffer, ByteBuffer, CharBuffer, DoubleBuffer	5
11	GUI Programming and Event Handling in Java: Java Swing Components like Window, Frame, panel, Dialog, File, Label, Button, List, Check Box, Text Components, Choice, Menu Components, Layout Manager: Border, Flow, Grid, Event Model: Listeners/Adapters	5
12	Java Database Connectivity: Types of Drivers Registering Drivers, Driver class, DriverManager Class Statements – QueryStatement, PreparedStatement,Callable Statements ResultSet	5
	Total	60

Book Recommended:

1. Thinking In Java: The Definitive Introduction To Object Oriented Programming In The Language Of The World Wide Web- 4Th Ed. By Eckel, Bruce New Delhi / Dorling Kindersley(India)Pvt.Ltd. / 2006

2. A Programmer's Guide To Java SCJP Certification: A Comprehensive Primer 3rd Edition, by Khalid A Mughal, Rolf W Rasmussen, Pearson Publications
3. 3)The Java Tutorial by M. Compione and K. Walrath
4. Core Java: Volume I, Fundamentals (8th Edition), by Cay S. Horstmann and Gary Cornell ,Publisher: Prentice Hall
5. 5)Core Java, Vol. 2: Advanced Features, 8th Edition by Cay S. Horstmann and Gary Cornell ,Publisher: Prentice Hall

Research Papers/Articles recommended for reading:

Java Platform Standard Edition 7 documentation on (docs.oracle.com/javase/7/docs/)

Suggested Evaluation Methods:

- Quizzes
- Practical Examination
- Assignments
- Presentation
- Midterm test
- End term test

Parallel/Similar courses the existing curriculum:

Sr.No.	Name of the course	Institute where it was offered
1	Object Oriented Programming	SICSR(BBAIT/BCA)

Name of Member		Vidya Kumbhar	Samaya Pillai	Sachin Naik		
Designation		Asst. Professor	Asst. Professor	Asst. Professor		
Org. / Inst.		SICSR	SICSR	SICSR		
Signature						

Name of the Expert:

Signature:

Date: