

Guru Daksh Government Polytechnic, Hisar

Name of Faculty : Sunil Soni

Semester : 4th (Jan-2026) Subject :

Oops (Object Oriented

Programming using Java)

Department : Computer Engg. Lesson

Plan : 15 Weeks

**Work load (Lecture / Practical) per week : Lectures- , Practicals -

Week	Theory		Practical	
	Lecture Day	Topic(including assignment/Test)	Practical Day	Topic
1st	1st	UNIT I - Introduction of Features Fundamentals of object oriented programming – procedure oriented programming Vs. object oriented programming (OOP)	1st	Installation of Java and Java IDEs
	2nd	Object oriented programming concepts – Classes, object, object reference, abstraction, encapsulation, inheritance and polymorphism.		
2nd	3rd	Introduction of eclipse (IDE) for developing programs in Java.	2nd	Installation of Java and Java IDEs
	4th	UNIT II - Language Constructs, Classes and objects Review of constructs of C used in JAVA : variables, types and type declarations		
3rd	5th	Data types, increment and decrement operators, relational and logical operators;	3rd	Write a program in JAVA to print “Hello” using classes.
	6th	Input using scanner class and output statement,		
4th	7th	if then else clause; conditional expressions, switch case	4th	Write a program to input using Scanner Class.
	8th	loops		
5th	9th	Arrays	5th	Write a program to print factorial of a Number.
	10th	Strings		
6th	11th	Creation of class, class members and methods	6th	Write a program to create a Class and make objects of that class.
	12th	Creating objects and accessing class member.		
7th	13th	UNIT III Inheritance and Polymorphism	7th	Create a class with data members Feet, Inches and add them.
	14th	Types of inheritance, single inheritance, multilevel inheritance,		
8th	15th	Hierarchical inheritance, hybrid inheritance.	8th	Create a class using constructors.t
	16th	Constructors and its types		

9th	17th	Constructor chaining, order of invocation	9th	Create a class and show the use of Single inheritance.
	18th	Method & constructor overloading		
10th	19th	Method overriding	10th	Create a class and show the use of multiple inheritance.
	20th	Up-casting and down-casting.		
11th	21st	UNIT IV - Abstract class & Interface Key points of Abstract class	11th	Create a class showing the use of Constructor Overloading.
	22nd	Key points of Abstract class & interface		
12th	23rd	Implementation of abstract class	12th	Create a program showing the use of Interfaces.
	24th	Difference between an abstract class & interface		
13th	25th	Implementation of multiple inheritance through interface.	13th	Create a program showing the use of Interfaces.
	26th	UNIT V - Exception Handling Definition of exception handling,		
14th	27th	Types of Exceptional Handling	14th	Create a program using Try and Catch Block.
	28th	implementation of keywords like try, catch, finally, throw & throws.		
15th	29th	Importance of exception handling in practical implementation of live projects.	15th	Create a program using Try and Catch Block.
	30th	Importance of exception handling in practical implementation of live projects.		