

Syllabus		
Unit No	Contents	Mapped CO
I	Introduction: What is a design pattern, Describing design patterns, the catalog of design pattern, organizing the catalog, how design patterns solve design problems, how to select a design pattern, how to use a design pattern What is object oriented development, key concepts of object oriented design other related concepts, benefits and drawbacks of the paradigm	CO1
II	Analysis a System: Overview of the analysis phase, stage 1 gathering the requirements functional requirements specification, defining conceptual classes and relationships, using the knowledge of the domain Design and Implementation.	CO1, CO2, CO3
III	Design Pattern Catalog: Structural patterns, Adapter, bridge, composite, decorator, façade, flyweight, proxy.	CO1, CO3
IV	Interactive systems and the MVC architecture: Introduction The MVC architectural pattern, analyzing a simple drawing program designing the system, designing of the subsystems, getting into implementation, implementing undo operation drawing incomplete items, adding a new feature pattern based solutions	CO1, CO3, CO4
V	Designing with Distributed Objects: Client server system, java remote method invocation, implementing an object oriented system on the web, Web services (SOAP, Restful), Enterprise Service Bus	CO1, CO2, CO4
Learning Resources		
Text Books		
1. Object-Oriented Analysis, Design and Implementation, Brahma Dathan, Sarnath Ramnath, II edition, 2013, Universities Press. 2. Design Patterns: Elements of Reusable Object-Oriented Software, Erich Gamma, Richard Helm, Ralph Johnson, John Vlissides, I Edition, 1994, Pearson Education		
References		
1. Pattern-Oriented Software Architecture Volume 1: A System of Patterns, Frank Buschmann, Regine Meunier, Hans Rohnert et al., I edition, 1996, Wiley. 2. AntiPatterns: Refactoring Software, Architectures and Projects in Crisis, William J. Brown et al., I Edition, 1998, John Wiley & Sons		
E-Resources and other Digital Material		
1. https://www.geeksforgeeks.org/software-design-patterns/		