III Year II Semester	L	T	P	C
Code: 20DS6661	4	0	0	4

SOFTWARE DESIGN AND SYSTEM INTEGRATION (Honors)

Course Objectives:
1. Understand different types of design patterns.
2. Analyze the system requirements and design
3. Learn different types of design patterns.
4. Understand the MVC architecture
5. Learn about Client server system

Course Objectives:
1. To identify different design patterns.
2. Illustrate the system requirements and design
3. Understand the different design patterns
4. Demonstrate the MVC architecture
5. Understand Client server system.

UNIT-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

UNIT-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, discussions and further reading.

UNIT-III

Design Pattern Catalog: Structural patterns, Adapter, bridge, composite, decorator, facade, flyweight, proxy.

UNIT-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.

UNIT-V

Designing with Distributed Objects: Client server system, java remote method invocation, implementing an object oriented system on the web (discussions and further reading) a note on input and output, selection statements, loops arrays.

Text Books

1. Fowler, Martin, *UML Distilled*, Third Edition, Addison-Wesley, 2004
2. Freeman, Eric & Robson, Elisabeth, Head First Design Patterns, First Edition, O'Reilly, 2004

Reference Books:

1. John Vlissides, *Pattern Hatching - Design Patterns Applied*, Addison-Wesley, 1998.