

2. OBJECT ORIENTED ANALYSIS AND DESIGN

Semester	Hours / Week			Total hrs	Credit	Max Marks		
	L	T	P			CIE	SEE	TOTAL
II	2	0	2	64	3	40	60	100

MODULE – 1 Introduction

7 H

Introduction: The structure of complex systems, the inherent complexity of software, attributes of complex system, organized and disorganized complexity, bringing order to chaos, designing complex systems, evolution of object model, foundation of object model, elements of object model, applying the object model.

MODULE -2 Classes and Objects

7H

Classes and Objects: The Nature of an Object, Relationships among Objects, The Nature of a Class, Relationships among Classes, The Interplay of Classes and Objects, The Importance of Proper Classification, Identifying Classes and Objects, Key Abstractions and Mechanisms.

MODULE-3 Introduction to UML

6 H

Introduction to UML: Why we model, Conceptual model of UML, Architecture, Classes, Relationships, Common Mechanisms, Class diagrams, Object diagrams

MODULE-4 Structural Modeling:

6 H

Structural Modeling: Package Diagram, Composite structure Diagram, Component diagrams, Deployment diagrams, Profile Diagram.

MODULE-5 Basic Behavioral Modeling

6 H

Basic Behavioral Modeling: Use case diagrams, Activity Diagrams, state machines, sequence diagram, Communication diagram, Timing diagram, interaction overview diagram, Events and signals, processes and Threads.

Total hours: 32Hours

Text Book(s):

1. Object- oriented Analysis and Design with Applications, Grady BOOCH, Robert A. Maksimchuk, Michael W. ENGLE, Bobbi J. Young, Jim Conallen, Kellia Houston, PEARSON, 3rd edition, 2013.
2. The Unified Modeling Language User Guide, Grady Booch, James Rumbaugh, Ivar Jacobson, PEARSON 12th Impression, 2012.

Reference Book(s):

1. "Object-oriented analysis and design using UML", Mahesh P. Matha, PHI
2. "Head first object-oriented analysis and design", Brett D. McLaughlin, Gary Pollice, Dave West, O'Reilly
3. "Object-oriented analysis and design with the Unified process", John W. Satzinger, Robert B. Jackson, Stephen D. Burd, Cengage Learning
4. "The Unified modeling language Reference manual", James Rumbaugh, Ivar Jacobson, Grady Booch, Addison-Wesley .
5. Applying UML and Patterns: An Introduction to object-oriented Analysis and Design and iterative development, by Craig Larman, Pearson Education. (1998)