(CS606) OBJECT ORIENTED ANALYSIS AND DESIGN

Objective of the course :

Gain enough competence in object-oriented analysis and design (OOAD) to tackle a complete OO project. Acquire UML, a common language for talking about requirements, designs, and component interfaces. Understand the main principles of good OO design. Understand what major tasks are appropriate to developing OO models and software. Understand the issues and options in reuse and component based development

UNIT - I

Introduction to UML : Importance of modeling, principles of modeling, object oriented modeling, conceptual model of the UML, Architecture, Software Development Life Cycle.

UNIT - II

Basic Structural Modeling : Classes, Relationships, common Mechanisms, and diagrams. Advanced Structural Modeling : Advanced classes, advanced relationships, Interfaces, Types and Roles, Packages.

UNIT - III

Class & Object Diagrams : Terms, concepts, modeling techniques for Class & Object Diagrams.

UNIT - IV

Basic Behavioral Modeling : Interactions, Interaction diagrams.Basic Behavioral Modeling-II : Use cases, Use case Diagrams, Activity diagramsAdvanced Behavioral Modeling : Events and signals, state machines, processes and Threads, time and space, state chart diagrams.

UNIT - V

Architectural Modeling : Component, Deployment, Component diagrams and Deployment diagrams.

TEXT BOOK :

1. Grady Booch, James Rumbaugh, Ivar Jacobson "The Unified Modeling Language User Guide" Pearson Education.

REFERENCE BOOKS :

- 1. UML 2 Toolkit Hans-Erik Eriksson, Magnus Penker, Brian Lyons, David Fado: WILEY-Dreamtech India Pvt. Ltd.
- 2. Fundamentals of Object Oriented Design in UML Meilir Page-Jones: Pearson Education.
- 3. Modeling Software Systems Using UML2 Pascal Roques: WILEY- Dreamtech India Pvt. Ltd.
- 4. Object Oriented Analysis & Design Atul Kahate: The McGraw-Hill Companies.