Course Objectives:
- To learn the concept of Object Oriented Software Development Process
- To get acquainted with UML Diagrams
- To understand Object Oriented Analysis Processes

Unit I
Object Basics, Object oriented philosophy, objects, classes, attributes, object behavior and methods, encapsulation and information hiding, class hierarchy, polymorphism, object relationships and associations, aggregations and object containment, case study, object identity, persistence. Object oriented systems development life cycle: Software development process, building high quality software, use-case driven approach, reusability.

Unit II
Object Oriented Methodologies: Rumbaugh et al.’s object modeling technique, Booch methodology, Jacobson et al methodologies, patterns, frameworks, the unified approach. Unified modeling language: Static and dynamic models, UML diagrams, UML class diagrams, use-case diagrams, UML dynamic modeling, packages, UML extensibility and UML meta model.

Unit III
Object Oriented Analysis Process: Business object analysis, use-case driven object oriented analysis, business process modeling, use-case model, developing effective documentation, case study. Classification: Classification theory, noun phrase approach, common class patterns approach, use-case driven approach, classes, responsibilities, and collaborators, naming classes.

Unit IV
Identifying Object Relationships, Attributes And Methods: Association, super-subclass relationships, a-part of relationships, case study, class responsibility, defining attributes for vianet bank objects, object responsibility, defining methods for vianet bank objects Design process and design axioms: Corollaries, design patterns.

Unit V
Designing Classes: UML object constraint languages, designing classes, class visibility, refining attributes for the vianet bank objects, designing methods and protocols, designing methods for the vianet bank objects, packages and managing classes. Designing access layer, case study. Designing view layer, macro level process.

Course Outcome:
- Understand Object Oriented Software Development Process
- Gain exposure to Object Oriented Methodologies & UML Diagrams
- To apply Object Oriented Analysis Processes for projects

Text Book
Reference Book