

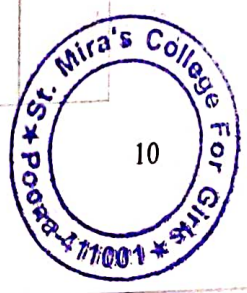
Object Oriented Software Engineering

Semester V	Subject Code: BC51704	Lectures: 60
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Objectives:
The syllabus aims in equipping students with, <ul style="list-style-type: none"> • To Understand concept of system design using UML • To understand system development through object oriented techniques

Unit 1: Object Oriented Concepts, Modeling and UML	16
<p>Object Orientation: (class, object, inheritance, polymorphism) Model : Introduction of Modeling, Object Oriented Modeling</p> <ul style="list-style-type: none"> • Object oriented system development <ul style="list-style-type: none"> ➤ Function/data methods ➤ Object oriented analysis ➤ Object oriented construction ➤ Object oriented testing • Identifying the elements of an object model <ul style="list-style-type: none"> ➤ Identifying classes and objects ➤ Specifying the attributes ➤ Defining operations ➤ Finalizing the object definition • Introduction to UML <ul style="list-style-type: none"> ➤ Overview of UML ➤ Conceptual Model of UML ➤ Architecture ➤ Advantages of UML 	

Unit 2: Basic and Advanced Structural Modeling	10
<ul style="list-style-type: none"> • Classes and Relationship • Common mechanism • Diagrams • Class diagram • Advanced classes • Advanced Relationship • Interface , Types and Roles • Packages 	



<ul style="list-style-type: none"> • Object Diagram 	
Unit 3: Basic Behavioral and Architecture Modelling	12
<ul style="list-style-type: none"> • Use cases, Use Case Diagram • Components Diagram • Deployment Diagram • Interaction Diagram • Sequence Diagram • Activity Diagram • State Chart Diagram • Collaboration Diagram (Case study on all diagrams) 	
Unit 4: Object Oriented Analysis	04
<ul style="list-style-type: none"> • Iterative Development • Understanding requirements • Unified process & UP Phases <ul style="list-style-type: none"> ➤ Inception ➤ Elaboration ➤ Construction ➤ Transition 	
Unit 5: Object Oriented Design	06
<ul style="list-style-type: none"> • The Coad and Yourdon Method and Jacobson Method • Generic components of OO Design model • System Design process <ul style="list-style-type: none"> ➤ Partitioning the analysis model ➤ Concurrency and subsystem allocation ➤ Task Management component ➤ Data Management component ➤ Resource Management component ➤ Inter sub-system communication • Object Design process 	

*Contact hours – 12 hours

Recommended Text Book:

- ✓ 1. *Object Oriented software Engineering*, Dr Kavita Khobragade, Mrs Deepal Bhoskar, Nilesh Magar, Nirali Publication 2015

Reference Books:

1. Grady Booch, James Rumbaugh, Ivar Jacobson, *The Unified Modeling Language User Guide*
2. Ivar Jacobson, *Object Oriented Software Engineering*
3. Pressman, *Software Engineering*