

# GUJARAT TECHNOLOGICAL UNIVERSITY

## B.E Semester: 4 Information Technology

Subject Code 140703

Subject Name OBJECT ORIENTED ANALYSIS DESIGN AND UML

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Sr.No	Course content
1.	Introduction: About Object Orientated Technology, Development and OO Modeling History.
2.	Modeling Concepts: Modeling design Technique, Three models, Class Model, State model and Interaction model.
3.	Class Modeling: Object and class concepts, link and association, Generalization and Inheritance, Advanced class modeling- aggregation, Abstract class metadata, constraints.
4.	State Modeling: Event, state, Transition and conditions, state diagram, state diagram behavior, concurrency, Relation of Class and State models.
5.	Interaction Modeling: Use case Models, sequence models, activity models
6.	Analysis and Design: Development Life cycle, Development stages, Domain Analysis-Domain class model, domain state model, domain interaction model, Iterating and analysis. Application Interaction model, Application class model, Application state Model, Adding operation.
7.	System Design: Estimating Performance, Making a reuse plan, breaking system into subsystems ,identifying concurrency, allocation of subsystems, management of data storage, Handling Global resources, choosing a software control strategy, Handling boundary condition, common Architectural style.
8.	Class design: Overview of class design ,designing algorithms recursing downward, refactoring, design optimization, Adjustment of Inheritance, Reification of Behavior.

### Reference Books:

1. Oriented Modeling and Design with UML second edition by Michael Blaha and James Rumbaugh