3/4 B.Tech - SECOND SEMESTER

IT6L1 **OOAD LAB** **Credits: 2**

Internal assessment: 25 marks

Lab: 3 Periods/week **Semester end examination: 50 marks**

Objectives:

- To provide knowledge on designing software application using object oriented paradigm.
- To discuss various UML diagrams for a given application.
- To design a system using UML diagrams with respect to various architectural views.

Outcomes:

Students will be able to

- Analyze and design structural diagrams.
- Construct UML diagrams to model the behavioral aspects (Use case, Activity, Sequence and Collaboration Diagrams) for a given problem.
- Construct UML diagrams to model the dynamic behavior of system.
- Design the architectural aspects of a system.

Exercises:

Case Study 1: Banking Application.
Case Study 2: Business Application.
Case Study 3: Implementing a Web Based Auction System using UML and Component-Based Programming

1. Identification of analysis classes, Identification of responsibilities of each class,
2. Identification of attributes of each class, Identification of relationships of classes.
3. Construction of UML static class diagram.
4. Construction of sequence diagram.
5. Construction of collaboration diagram.
6. Identification of actors, identification of use cases, flow of events, construction of use case diagram.
7. Building a business process model using UML activity diagram.
8. Analyzing the object behavior by constructing the UML state chart diagram.
9. Model the component diagrams.
10. Model the deployment diagrams.

Reference Book:

1. Rob Pandey, Pauline Wilcox Applying UML Advanced Application, Elsevier.

e- Learning Resources

1.http://nptel.ac.in/courses/122105022/27A
2.http://www.csm.ornl.gov/~sheldon/public/sheldonf_auction.pdf