**IT6413 SOFTWARE ENGINEERING LABORATORY**

**L T P C**

**0 0 3 2**

**OBJECTIVES:**

To understand the software engineering methodologies for project development.  
 To gain knowledge about open source tools for Computer Aided Software Engineering.  
 To develop an efficient software using case tools

**SOFTWARE REQUIRED:**

  Open source Tools: StarUML / UMLGraph / Topcased Prepare the following documents for each experiment and develop the software using software engineering methodology

1. Problem Analysis and Project Planning -Thorough study of the problem – Identify Project

scope, Objectives and Infrastructure.  
2. Software Requirement Analysis – Describe the individual Phases/modules of the project and

Identify deliverables.  
3. Data Modelling – Use work products – data dictionary, use case diagrams and activity

diagrams, build and test class diagrams, sequence diagrams and add interface to class

diagrams.  
4. Software Development and Debugging – implement the design by coding  
5. Software Testing – Prepare test plan, perform validation testing, coverage analysis,  
 memory leaks, develop test case hierarchy, Site check and site monitor.

**Sample Experiments: Academic domain**  
1. Course Registration System  
2. Student marks analysing system  
Railway domain  
3. Online ticket reservation system  
4. Platform assignment system for the trains in a railway station  
Medicine domain  
5. Expert system to prescribe the medicines for the given symptoms  
6. Remote computer monitoring  
Finance domain  
7. ATM system  
8. Stock maintenance  
Human Resource management  
9. Quiz System  
10. E-mail Client system.

**TOTAL: 45 PERIODS**

**LAB EQUIPMENT FOR A BATCH OF 30 STUDENTS:**

**SOFTWARE:**

Argo UML / StarUML / UMLGraph / Topcased or Equivalent.