Course Type	Course Code	Name of Course	L	T	P	Credit
DP7	CSC308	**Software Engineering Lab**	0	0	2	2

Course Objective

Develop methods and procedures that can be used to consistently produce high-quality software at low cost. How to use available resources to develop software, reduce cost of software and how to maintain quality of software. Methods and tools of testing and maintenance of software.

Learning Outcomes

Upon successful completion of this course, students will study and learn the following aspects of software engineering: ● Different Life cycle models for different software applications.
- Cost estimation technique
- Understand the techniques and concepts of software project management.
- Learn UML diagrams.
- Testing a software products
- Quality control mechanism

Unit No.	Topics to be Covered	Lecture Hours	Learning Outcome
1	Process and Models	6	Comprehensive introduction about the course content will be delivered. Difference between software and hardware.
2	Software Development Methodologies	4	This section encompasses all phases of software development that are considered crucial to the success of software projects.
3	Software Project Management.	2	Brief discussion on requirements analysis and specification, software metrics, cost estimation methods, efficient way project scheduling.
4	Software Design: Function oriented design	4	Learn some important facets of software design, the methodology of Structured Analysis/Structured Design (SA/SD) in relation to traditional function-oriented design.
5	Object oriented design: UML diagram, Use Case Model, Class Diagrams, Interaction Diagram, Activity Diagram, State Chart Diagram, Architectural design, Component design, User interface design	6	Study object oriented design using UML.
6	Whit Box Testing, Black-Box Testing	6	Learn coding and unit testing techniques. Integration and system testing techniques are elaborately discussed in this module.

Text Books:
1. Rajib Mall, Fundamentals of Software Engineering.
2. Pankaj Jalote, An integrated approach to Software Engineering

Reference Books:
1. Ian Sommerville, Software Engineering
2. Roger S. Pressman, Software Engineering: A Practitioner's App