Course Type	Course Code	Name of the Course	L	T	P	Credits
DC15	MCC 401	**Software Engineering**	3	0	0	9

Course Objective
Software Engineering is the core course of Computer Science which gives the Idea about Software development process
Learning Outcomes
Students will learn about the various aspects of software development process.

Unit No.	Topics to be Covered	Lecture Hours	Learning Outcome
1	Introduction to Software Engineering, Software Life Cycle, Software Life Cycle Models.	3	This unit will help students to understand Software Life Cycle, Software Life Cycle Models.
2	Planning a project: Metrics for Effort Estimation. Cost Estimation, Project Scheduling, Staffing and Personal Planning, Project Monitoring, Risk Management	6	This unit will help students to understand the concept of Project Planning, Cost estimation Schedule Estimation different metric, Risk Assessment.
3	Software Requirements Analysis: Introduction, Problem Analysis, Data Flow Diagram, Requirement Specifications Techniques with Applications.	7	This unit will help students to get the concept of Software Requirements Analysis
4	Design a Project: Introduction, Function Oriented Design, Different Methods of Function Oriented Design with Applications, Detailed Design. Object Oriented Modeling & Design: UML Design Techniques and Its Applications.	11	This unit will help students to get the concept of Software Design techniques related to Functional Design techniques and Object Oriented Design techniques.
5	Coding: Coding Process, Guidelines, Common Programming Errors, Code Walkthrough. Testing: Testing Fundamentals, Types of Testing, Levels of Testing, Test Plans, Test-Cases with Applications. Software Quality Assurance. Software Maintenance, Software Re-engineering	15	This unit will help students to get idea about Dos and Don'ts about Coding, different Testing techniques, Software Maintenance and re-engineering.

Text Books:

1. Software Engineering: A Practitioner's Approach by R.S. PressMan, McGraw Hill.

Reference Books:

1. Fundamentals of Software Engineering by R. Mall, Prentice Hall of India.
2. An Integrated Approach to Software Engineering by P. Jalote, Narosa.