

**Software Engineering**

**CS701**

**Contracts: 3L**

**Credits- 3**

**Module I**

Software Engineering -Objectives, Definitions ,Software Process models - Waterfall Model , Prototype model, RAD, Evolutionary Models ,Incremental, Spiral [4L]

Software Project Planning- Feasibility Analysis, Technical Feasibility, Cost- Benefit Analysis, COCOMO model. [4L]

**Module II**

Structured Analysis , Context diagram and DFD, Physical and Logical DFDs ,Data Modelling, ER diagrams, Software Requirements Specification [5L])

**Module III**

Design Aspects :Top-Down And Bottom-Up design; Decision tree, decision table and structured English, Structure chart, Transform analysis Functional vs. Object- Oriented approach. [3L]

**Unified Modelling Language**

Class diagram, interaction diagram: collaboration diagram, sequence diagram, state chart diagram, activity diagram, implementation diagram. [4L]

**Module V**

Coding & Documentation - Structured Programming, Modular Programming, Module Relationship- Coupling, Cohesion, OO Programming, Information Hiding, Reuse, System Documentation. [5L]

Testing - Levels of Testing, Integration Testing, System Testing. [5L]

Software Quality, Quality Assurance, Software Maintenance, Software Configuration Management, Software Architecture. [6L]

**Reference Books:**

1. Software Engineering : A practitioner's approach - Pressman(TMH)
2. Software Engineering- Pankaj Jalote (Wiley-India)
3. Software Engineering- Rajib Mall (PHI)
4. Software Engineering -Agarwal and Agarwal (PHI)