

Software Engineering

IT-603

Contracts: 3L

Credits- 3

Module I

Overview of System Analysis & Design , Business System Concept, System Development Life Cycle, Waterfall Model , Spiral Model, Feasibility Analysis, Technical Feasibility, Cost- Benefit Analysis, COCOMO model. **[10L]**

Module II

System Design – Context diagram and DFD, Problem Partitioning, Top-Down And Bottom-Up design; Decision tree, decision table and structured English; Functional vs. Object- Oriented approach. **[5L]**

Module III

Coding & Documentation – Structured Programming, OO Programming, Information Hiding, Reuse, System Documentation. **[4L]**

Testing – Levels of Testing, Integration Testing, Test case Specification, Reliability Assessment, Validation & Verification Metrics, Monitoring & Control. **[8L]**

Module IV

Software Project Management – Project Scheduling, Staffing, Software Configuration Management, Quality Assurance, Project Monitoring. **[7L]**

Module V

Fundamentals of Object Oriented design in UML

Static and dynamic models, why modeling, UML diagrams: Class diagram, interaction diagram: collaboration diagram, sequence diagram, state chart diagram, activity diagram, implementation diagram. **[10 L]**