

Software Engineering

Code :EI 504C(CSE)

Contacts : 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 Requirement Specification – DFD, Data Dictionary, ER diagram, Process Organization & Interactions. **[5L]**

System Design – 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]**

CASE TOOLS : Concepts, use and application. **[5L]**

Books:

Text:

1. R. G. Pressman – Software Engineering, TMH
2. Behforooz, Software Engineering Fundamentals, OUP
3. Ghezzi, Software Engineering, PHI
4. Pankaj Jalote – An Integrated Approach to Software Engineering, NAROSA.
5. Object Oriented & Classical Software Engineering(Fifth Edition), SCHACH, TMH
6. Vans Vlet, Software Engineering, SPD
7. Uma, Essentials of Software Engineering, Jaico
8. Sommerville, Ian – Software Engineering, Pearson Education
9. Benmenachen, Software Quality, Vikas

Reference:

1. IEEE Standards on Software Engineering.
2. Kane, Software Defect Prevention, SPD