

PSE209 SOFTWARE PROJECT MANAGEMENT

L T P Cr

3 0 2 4.0

Course Objective: It gives an in depth knowledge of software project management and project planning. It also covers the Step Wise framework in project planning

Project Planning: Characteristics of a software project, Software scope and feasibility, resources, the SPM plan.

Software Project Estimation: Size/scope estimation, Decomposition techniques, WBS. Effort estimation: Sizing, Function point, LOC, FP vs LOC. Schedule estimation: GANTT Charts, Activity networks, PERT/CPM networks. Cost estimation: Models: COCOMO I, COCOMO II.

Quality Planning: Quality control, Quality assurance, Formal Technical Reviews, The SQA Plan, ISO and CMM standards.

Risk Management: Reactive vs proactive Risk strategies, Risk projection, Risk Refinement, Risk Monitoring, Monitoring and management, RMMM plan.

Measurement and Tracking Planning: Earned Value Analysis.

Team Management: Team structures: hierarchical, Egoless, chief programmer, mixed; Team software Process; Resource leveling, Building a team: Skill sets.

Configuration Management: Baselines, Configurable items, SCM repository, SCM process, version control change control, configuration audit.

Project Monitoring and Control: Audits and Reviews.

Laboratory Work: Implementation of software project management concepts using tools like MS Project, Rational Suite (RequisitePro, Purify, etc.), Advanced Cost Estimation Models. It should also include a micro project involving software project management.

Recommended Books

1. Software Project Management, Bob Hughes and Mike Cotterell, Tata McGraw Hill 5th edition, 2009
2. A practitioner's Guide to Software Engineering, Roger Pressman, Tata McGraw Hill 2014 8th edition
3. *Head First PMP: A Brain Friendly Guide To Passing The Project Management Professional Exam, 2013*