



Course Outline for Software Project Management

1. Introduction to Project management
 - a. Project Management Basics
 - b. Role of a Project Manager
 - c. Project Resources
 - d. Phases of Software Project
2. Introduction to PERT/CPM
 - a. Work Breakdown Structure
 - b. Network diagramming
 - c. Critical Path
 - d. PERT Probability
 - e. Crashing
 - f. Resource Leveling
 - g. Exercises
3. Software Effort Estimation
 - a. Estimations Basics
 - b. LOC Method
 - c. Function Points
 - d. Activity Based Estimation
 - e. COCOMO
 - f. Uncertainty in estimation
4. Project Planning
 - a. Management
 - b. Risk
 - c. Configuration
 - d. Quality Assurance
 - e. Induction
 - f. Schedule
5. Configuration Management
 - a. Configuration Management Basics
 - b. Environment for Configuration Control
 - c. Configuration Control Vs Version Control
 - d. Code Management
 - e. Change Management
 - f. Information Management
6. Quality Assurance in Projects
 - a. Quality Basics
 - b. Quality Assurance Activities in Projects
 - i. Standards
 1. Coding Standards
 2. Documentation Standards
 3. Design Standards
 4. Templates
 5. Formats
 - ii. Processes
 - c. Quality Control Activities in Projects



- i. Verification
 - ii. Validation
 - iii. Quality Metrics
 - d. Introduction to ISO 9000, SEI – CMM Maturity Levels, Six Sigma
- 7. Productivity Aspects
 - a. Productivity Basics
 - b. Productivity Measurement & Metrics
- 8. Human Factors and Leadership
 - a. Motivation
 - b. Communication
 - c. Handling Difficult People
 - d. Leadership
 - e. Team Dynamics
- 9. Progress Tracking & Control
 - a. Progress Assessment & Reporting
 - b. Scope Management
 - c. Risk Mitigation
- 10. Project Closeout
 - a. Project post-mortem
 - b. Collection of re-usable Components
 - c. Draw lessons from the good & bad Practices of the project
 - d. Project-End Audit
- 11. Organizational Support for Effective Project Management
 - a. Recognition as a Specialist Discipline
 - b. Organize Knowledge Repository
 - c. Processes, Standards & Guidelines
 - d. Training