

PIT7J005

Software Project Management

3-0-0

PURPOSE: This course on Software Project Management highlights Software Project planning and management.

INSTRUCTIONAL OBJECTIVES:

1. Software Process and Metrics
2. Project Planning and Risk Management
3. Software Quality Assurance and Software Configuration Management

UNIT I - BASIC CONCEPTS (9 hours)

Product Process and project—Definition—Product life Cycle: Prototype Development Phase, Alpha Phase, Beta Phase, Production & Maintenance Phase—Project Life Cycle Models: Water fall Model, Prototype Model, RAD & Spiral Model—Process Models.

UNIT II-UMBRELLA ACTIVITIES (9 hours)

Metrics—Software Configuration Management: Process and activities, Configuration audit, Metrics in SCM, Tools & automation –Software Quality Assurance: Quality Control & Quality Assurance, Tools, Measures of SQA Success—Risk Management: Risk Management Cycle, Risk Identification, Quantification, Monitoring, Mitigation, Metrics in Risk Management.

UNIT III - PROJECT MANAGEMENT PROCESS AND ACTIVITIES

(9 hours)

In-Stream activities - Project initiation: activities, Outputs, Quality Records, completion criteria

—Project Planning and Tracking: Components, activities specific to Project tracking—Project Closure: Effective closure Process issues, Metrics for Project Closure.

UNIT IV—ENGINEERING ACTIVITIES IN PROJECT LIFE CYCLE

(9 hours)

Software requirement Gathering: Inputs and start criteria, Dimensions, steps, Output & Quality records, Skill sets, Challenges, Metrics for Requirement Phase – Estimation : Phases of Estimation, Methodology, Models for size estimation, Challenges, Metrics for Estimation Process

—Design and Development Phases-Project Management in Testing & Maintenance Phase.

EMERGING TRENDS IN PROJECT MANAGEMENT (9 hours)

Globalization Issues in Project management : Evolution, Challenges, Models – Impact of the internet on Project Management: Effect of internet on Project Management, managing project for internet, Project management activities – People Focused Process Models: People centric models, P-CMM, other people focussed Models.

TEXT BOOKS

1. Ramesh Gopalswamy, “Managing and global Software Projects”, Tata McGraw Hill.Tenth Reprint 2011.(Revised)

REFERENCES

1. Roger S.Pressman, “Software Engineering - A Practitioner’s Approach”, 7th Edition McGraw Hill, 2010.(Revised).