

**MG6088**

**SOFTWARE PROJECT MANAGEMENT**

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**OBJECTIVES:**

- To outline the need for Software Project Management
- To highlight different techniques for software cost estimation and activity planning.

**UNIT I PROJECT EVALUATION AND PROJECT PLANNING 9**

Importance of Software Project Management - Activities Methodologies - Categorization of Software Projects - Setting objectives - Management Principles - Management Control - Project portfolio Management - Cost-benefit evaluation technology - Risk evaluation - Strategic program Management - Stepwise Project Planning.

**UNIT II PROJECT LIFE CYCLE AND EFFORT ESTIMATION 9**

Software process and Process Models - Choice of Process models - mental delivery - Rapid Application development - Agile methods - Extreme Programming - SCRUM - Managing interactive processes - Basics of Software estimation - Effort and Cost estimation techniques - COSMIC Full function points - COCOMO II A Parametric Productivity Model - Staffing Pattern.

**UNIT III ACTIVITY PLANNING AND RISK MANAGEMENT 9**

Objectives of Activity planning - Project schedules - Activities - Sequencing and scheduling - Network Planning models - Forward Pass & Backward Pass techniques - Critical path (CRM) method - Risk identification - Assessment - Monitoring - PERT technique - Monte Carlo simulation - Resource Allocation - Creation of critical patterns - Cost schedules.

**UNIT IV PROJECT MANAGEMENT AND CONTROL 9**

Framework for Management and control - Collection of data Project termination - Visualizing progress - Cost monitoring - Earned Value Analysis- Project tracking - Change control- Software Configuration Management - Managing contracts - Contract Management.

**UNIT V STAFFING IN SOFTWARE PROJECTS 9**

Managing people - Organizational behavior - Best methods of staff selection - Motivation - The Oldham-Hackman job characteristic model - Ethical and Programmed concerns - Working in teams - Decision making - Team structures - Virtual teams - Communications genres - Communication plans.

**TOTAL: 45 PERIODS**

**OUTCOMES:**

- At the end of the course the students will be able to practice Project Management principles while developing a software.

**TEXTBOOK:**

1. Bob Hughes, Mike Cotterell and Rajib Mall: Software Project Management - Fifth Edition, Tata McGraw Hill, New Delhi, 2012.

**REFERENCES:**

1. Robert K. Wysocki "Effective Software Project Management" - Wiley Publication, 2011.
2. Walker Royce: "Software Project Management"- Addison-Wesley, 1998.
3. Gopalaswamy Ramesh, "Managing Global Software Projects" - McGraw Hill Education (India), Fourteenth Reprint 2013.