

MSE2005 SOFTWARE PROJECT MANAGEMENT

Module 1

Introduction To Software Project Management And Step Wise Project Planning: Introduction, What is a Project? Software Projects Versus Other Types of Project, Contact Management and Technical Project Management, Activities Covered by Software Project Management, Plans, Methods, and Methodologies, Some ways of Categorizing Software Projects, What is Management?, Problems with Software Projects, Setting Objectives, Stakeholders, The Business Case, Requirement Specification, Management Control, Overview of Project Planning (Step wise).

Module 2

Project Evaluation: Introduction, Strategic Assessment, Technical Assessment, Cost- Benefit Analysis, Cash Flow Forecasting, Cost- Benefit Evaluation Techniques, Risk Evaluation.

Selection Of An Appropriate Project Approach: Introduction, Choosing Technologies, Technical Plan Contents List, Choice of Process Models, Structure Versus Speed of Delivery, The Waterfall Model, The V-Process Model, The Spiral Model, Software Prototyping, Other ways of Categorizing Prototyping, Controlling Changes during Prototyping, Incremental Delivery, Dynamic Systems Development Method, Extreme Programming, Managing Iterative Processes.

Module 3

Software Effort Estimation: Introduction, Where are Estimates done? , Problems with Over-and Under-Estimates, The Basis for Software Estimating, Software Effort Estimation Techniques, Expert Judgement, Estimating by Analogy, Albrecht Function Point Analysis, Function Point Mark II, Object Points, A Procedural Code- Oriented Approach, COCOMO: A Parametric Model.

Activity Planning: Introduction, The Objectives of Activity Planning, When to Plan, Project Schedules, Projects and Activities, Sequencing and Scheduling Activities, Network Planning Models, Formulating a Network Model, Adding the Time Dimension, The Forward Pass, The Backward Pass, Identifying the Critical Path, Activity Float, Shortening the Project Duration, Identifying Critical Activities, Activity- On – Arrow Networks.

Module 4

Risk Management: Introduction, The Nature of Risk, Types of Risk, Managing Risk, Hazard Identification, Hazard Analysis, Risk Planning and Control, Evaluating Risks to the Schedule.

Resource Allocation: Introduction, The Nature of Resources, Identifying Resources Requirements, Scheduling Resources, Creating Critical Paths, Counting the Cost, Being Specific, Publishing the Resources Schedule, Cost Schedules, The Scheduling Sequence.

Module 5

Monitoring And Control: Introduction, Creating the Framework, Collecting the Data, Visualizing Progress, Cost Monitoring, Earned Value, Prioritizing Monitoring, Getting the Project Back to Target, Change Control.

Managing Contracts: Introduction, Types of Contract, Stages in Contract Placement, Typical Terms of a Contract, Contract Management, Acceptance.

Module 6

Managing People And Organizing Teams: Introduction, Understanding Behaviour, Organizational Behaviour: A Background, Selecting The Right Person For The Job, Instruction In The Best Methods, Motivation, The Oldham- Hackman Job Characteristics Model, Working In Groups, Becoming A Team, Decision Making, Leadership, Organizational Structures.

Module 7

Software Quality: Introduction, The Place Of Software Quality In Project Planning, The Importance Of Software Quality, Defining Software Quality, ISO 9126, Practical Software Quality Measures, Product Versus Process Quality Management, External Standards, Techniques To Help Enhance Software Quality, Quality Plans.

Text Book:

B.Huges and M.Cotterell- Software Project Management 3rd Edn, TMH, New Delhi, 2004.

Reference Book:

P.Jolote- Software Project Management in Practice, Pearson Education, New Delhi, 2002.