

GUJARAT TECHNOLOGICAL UNIVERSITY

M.E. Semester: I

M.E. Information Technology

Subject Name: **Project Management**

Sr.No	Course content
1.	What is Project Management? Functions and Viewpoints of Management, Project Viewpoint versus Traditional Management, Evolution of Project Management, Where is Project Management Appropriate?, Management by Project: A Common Approach, Different Forms of Project Management, Project Environments, Project Management in Industrial Settings, Project Management in the Service Sector, Project and Program Management in Government and the Public Sector, Summary
2.	Systems Approach and Systems Engineering: System thinking, Definition of system, Systems Concepts and Principles, Human Organizations, System Approach, System Engineering, Relevancy of the System Approach to project Management , Summary
3.	Systems Development cycle and Project Conception: Systems life cycle, Systems Development Cycle,Phase A: Conception, Project feasibility, Project charter, The Project Proposal, Project Contracting, Summary
4.	Project and Definition: Phase B: Definition, Project Definition, System Definition, Concurrent Engineering, Systems Development in Industry and Government, Summary
5.	Planning Fundamentals: Planning Steps, The Project Master Plan, Scope and statement of work, Work Definition, Project Organization and Responsibility, Scheduling, Planning & Scheduling Charts, Line of Balance, Procurement management, Summary
6.	Project Time Planning and Networks: Network Diagrams,The Critical Path, The Critical and Calendar Schedule ,Management Schedule Reserve, Precedence Diagramming Method,Scheduling with Resource Constraint, Criticism of Network Methods , Summary
7.	Project Management Concepts: The Management Spectrum, People, The Product, The Process,The Project, The W ⁵ HH Principle, Critical Practices, Summary
8.	Process and Project Metrics: Metrics in the Process and Project Domains, Software Measurement, Metrics for

	Software Quality, Integrating Metrics within the Software Process, Metrics for Small Organizations, Establishing a Software Metrics Program, Summary
9.	Estimation for Software Projects: Observations on Estimation, The Project Planning Process, Software Scope and Feasibility, Resources, Software Project Estimation, Decomposition Techniques, Empirical Estimation Models, Estimation for Object-Oriented Projects, Specialized Estimation Techniques, The Make/Buy Decision, Summary
10.	Project Scheduling: Basic Concepts, Project Scheduling, Defining a Task Set for the Software Project, Defining a Task Network, Scheduling, Earned Value Analysis, Summary
11.	Risk Management: Reactive versus Proactive Risk Strategies, Software Risks, Risk Identification, Risk Projection, Risk Refinement, Risk Mitigation, Monitoring, and Management, The RMMM Plan, Summary
12.	Maintenance and Reengineering: Software Maintenance, Software Supportability, Reengineering, Business Process Reengineering, Software Reengineering, Reverse Engineering, Restructuring, Forward Engineering, The Economic of Reengineering, Summary

Reference Books:

1. Project Management for Business, Engineering and Technology By John M Nicolas and Herman Steyn(Elsevier Publication)
2. **Software Project Management in Practice by Pankaj Jalote(addision waseley)**
3. Project Management by Kamaraju Ramakrishna (PHI)