

GUJARAT TECHNOLOGICAL UNIVERSITY

INFORMATION TECHNOLOGY

B. E. SEMESTER: VII

Subject Name: **Software Project Management (Department Elective – I)**

Subject Code: **171603**

Teaching Scheme				Evaluation Scheme			
Theory	Tutorial	Practical	Total	University Exam (E)		Mid Sem Exam (Theory) (M)	Practical (Internal)
				Theory	Practical		
4	0	2	6	70	30	30	20

Sr. No.	Course Contents	Total Hrs
1.	Introduction to Software Project Management What is a Project? , Reasons for IT project failure, Triple constraint of IT project management, Management spectrum of project, Overview of project life cycle models, W ⁵ HH principle, Project manager skills and job description, PMP certification PMI and PMBOK®	04
2.	Conceptualization and Initiation of IT project Introduction, IT project methodology(Conceptualize and initiate, develop project charter and plan, Execute and control, Close, Evaluate success of project) , Business case , Process for development of business case, Business case template, Balanced scorecard approach for project selection	04
3.	Project Charter Introduction, Project management process and their correlation with project life cycle phases, Introduction to Project Integration management and seven processes, Project charter – What it contains?, Project charter template, Kick-off meeting	04
4.	Project Scope Management Introduction, Processes of scope management- scope planning, scope definition, Work Breakdown structure (with different approaches to develop it), scope verification, scope change control	04
5.	Project Human Resource Management Introduction, Organizational structure – Function, Project and Matrix, Keys to managing people - motivation theories and improving effectiveness, Project team – selection and acquisition, team , team building activities, Managing the	04

	project team – tools and techniques, Use of software to assist in HRM	
6.	Project Time and Cost Management Introduction, Development of project schedule, CPM and PERT (Activity, Event, Milestones, Network, Path, Critical Path, Critical Time), Finding critical path and time, Activities their sequencing and dependencies, Project network diagrams, Development of schedule, Gantt Charts, Milestones in Gantt chart, Tracking Gantt charts, Cost estimating- types, Cost budgeting, Cost control, Earned Value Management	07
7.	Project Risk Management Introduction, Risk Management Process, Risk Identification for IT projects, Qualitative and Quantitative approaches to Risk Analysis, Risk Strategies(Risk Response Planning), Risk Monitoring and Control, Risk Response and Evaluation	05
8.	Project Quality Management Introduction, TQM, Quality Planning, Quality Assurance, Improvement and Control, Tools and techniques of quality control, Six Sigma, CMMI, Quality standards and metrics, Verification and validation, Change control and configuration management	04
9.	Project Communication Management Introduction, Project Communication Plan, Project metrics, Information distribution- formal and informal methods, effective and timely distribution of information, determining number of communications channels for information distribution, Performance Reporting	04
10.	Project Change Management Introduction, Impact of change, Change as a process, Emotional behavior pattern of change, Change Management plan, Dealing with resistance and conflict	04
11.	Project Procurement Management Introduction, Processes- Planning Purchases and Acquisition (With tools and techniques- Make –or Buy, Expert Judgment, Types of contracts), Contracting, Request Seller Responses, Select Sellers, Contract Administration, Contract Closure, Outsourcing of products and services,	04
12.	Project Leadership and Ethics Introduction, Project Leadership, Modern approaches, Styles of leadership, Ethical leadership, Making sound ethical decisions in the situations of conflict	04
13.	Closure of a Project Introduction, Project Implementation, Administrative closure, Project Evaluation	02

Text Books:

- 1 Jack T Marchewka, “Information Technology Project Management”, Third Edition (International Student Version) , Wiley India
- 2 Kathy Schwalbe, “Project Management in IT”, India Edition, Cengage Learning

Reference Books:

1. Bob Hughes, Mike Cotterell, Rajib Mall “Software Project Management”, Fifth Edition, Mc Graw-Hill.
2. Pankaj Jalote, “Software Project Management in Practice”, 2002, Pearson, Education Asia.
3. Samuel J mantel et.el “Project Management- Core Textbook”, First India Edition, Wiley India
4. Roger S. Pressman, “Software Engineering: A practical Approach”, Sixth Edition, McGraw-Hill.
5. Ian Sommerville, “Software Engineering”, Addison Wesley.