Course Code	PCA20G01T	Course Name	SOFTWARE PROJECT MANAGEMENT	Course Category	G	Generic Elective Course	L	T	P	C
							3	0	0	3

Pre-requisite Courses	Nil	Co-requisite Courses	Nil	Progressive Courses	Nil
Course Offering Department	Computer Applications	Data Book / Codes/Standards	Nil		

Course Learning Rationale (CLR):	The purpose of learning this course is to,	Learning	Program Learning Outcomes (PLO)

		1	2	3
		Level of Thinking (Bloom)	Expected Proficiency (%)	Expected Attainment (%)
CLR-1 :	To develop an awareness of the need for project planning and management.			
CLR-2 :	To know about software effort estimation and activity planning.			
CLR-3 :	To explore risk and people management.			
CLR-4 :	To learn about project monitoring and control mechanisms.			
CLR-5 :	To know about software quality management.			
CLR-6 :	To Learn About Process Models.			
Course Learning Outcomes (CLO):	At the end of this course, learners will be able to:			
CLO-1 :	Differentiate between various software process models.	2	85	80
CLO-2 :	Prepare project planning documents.	3	85	80
CLO-3 :	Estimate the software cost for projects.	3	85	80
CLO-4 :	Perform effective activity planning.	3	85	80
CLO-5 :	Prepare effective project scheduling work product.	3	85	80
CLO-6 :	Perform software quality management activities.	3	85	80

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
		Disciplinary Knowledge	Critical Thinking	Problem Solving	Analytical Reasoning	Research Skills	Team Work	Scientific Reasoning	Reflective Thinking	Self-Directed Learning	Multicultural Competence	Ethical Reasoning	Community Engagement	ICT Skills	Leadership Skills	Life Long Learning
CLO-1 :		L	H	H	H	H	M	-	H	M	H	-	H	-	-	-
CLO-2 :		L	H	H	H	H	-	-	M	M	L	-	H	-	-	-
CLO-3 :		L	H	H	H	H	-	-	M	M	L	-	H	-	-	-
CLO-4 :		L	H	H	H	H	-	-	M	M	L	-	H	-	-	-
CLO-5 :		L	H	H	H	H	-	-	M	M	L	-	H	-	-	-
CLO-6 :		L	H	H	H	H	-	-	M	M	L	-	H	-	-	-

Duration (hour)		9	9	9	9	9
S-1	SLO-1	Basics of SPM : Definition	Software Effort Estimation:	Categories of Risk	Creating the Framework	Managing Contracts: The ISO 12207 Approach,
	SLO-2	Software Projects Versus Other Types of Project	Problems with Over and Under Estimates	Framework for Dealing with Risk	Creating the Framework	Supply Process, Types, Stages
S-2	SLO-1	Contract Management	Basis of Software Estimating	Risk Identification	Collecting the Data:	Contract Management
	SLO-2	Technical Project Management	Software Estimating – Techniques	Risk Assessment	Partial Completion Reporting	Managing People
S-3	SLO-1	Activities – Plans, Methods	Expert Judgment	Risk Planning	Risk Reporting –	Organizing Teams:
	SLO-2	Methodologies	Cosmic Full Function Points	Risk Management	Visualizing Progress: Gantt chart	Understanding Behaviour

S-4	SLO-1	Requirement Specification – Management Control	A Procedural Code Oriented Approach-COCOMO: A Parametric Model	Evaluating Risks to the Schedule	Slip chart – Ball Charts	Organizational Behaviour, Motivation
S-5	SLO-1 SLO-2	Overview of Project Planning	Activity Planning: Objectives – Project Schedules	Applying the PERT Technique	The Timeline – Cost Monitoring	The Oldham-Hackman Job Characteristics Model
S-6	SLO-1	. Introduction to Step Wise Project Planning.	Projects and Activities – Sequencing and Scheduling Activities	Monte Carlo Simulation – Critical Chain Concepts	Earned Value Analysis	Decision Making, Leadership
S-7	SLO-1	Introduction to Step Wise Project Planning – Programme Management and Project Evaluation:	– Network Planning Models – Formulating A Network Model	Resource Allocation: Nature of Resources	Prioritizing Monitoring	Dispersed and Virtual Teams, Software Quality – Importance
S-8	SLO-1	Programme Management, Benefits, Evaluation, Technical Assessment, Cost -Benefit Analysis, Risk Evaluation	Identifying Critical Path – Shortening the Project Duration	Identifying Resource Requirements – Scheduling Resources	Getting the Project Back to Target	Defining Software Quality, ISO 9126, Software Quality Measures
S-9	SLO-1 SLO-2	Selection of an Appropriate Project Approach: Choosing Technologies, Process Models, Software Prototyping, Dynamic Systems Development Method, Managing Iterative Processes.	Identifying Critical Activities – Activity-on-arrow Networks	Creating Critical Paths – Counting the Cost – Cost Schedules – Scheduling Sequence.	Change Control.	Product Versus Process Quality Management, External Standards, Quality Plans

Learning Resources	1. Bob Hughes, Mike Cotterell, "Software Project Management", Fourth Edition, Tata McGraw-Hill, 2011.	1. Walker Royce, "Software Project Management: A Unified Framework", Pearson Education, 2004. 2. Rishabh Anand, "Software Project Management", S. K. Kataria, 2013. 3. S. A. Kelkar, "Software Project Management: A Concise Study Paperback", Prentice Hall of India, 2013.

Learning Assessment											
Level	Bloom's Level of Thinking	Continuous Learning Assessment (50% weightage)								Final Examination (50% weightage)	
		CLA – 1 (10%)		CLA – 2 (10%)		CLA – 3 (20%)		CLA – 4 (10%) #			
		Theory	Practice	Theory	Practice	Theory	Practice	Theory	Practice	Theory	Practice
Level 1	Remember	40%	-	30%	-	30%	-	30%	-	30%	-
	Understand										
Level 2	Apply	40%	-	40%	-	40%	-	40%	-	40%	-
	Analyze										
Level 3	Evaluate	20%	-	30%	-	30%	-	30%	-	30%	-
	Create										
	Total	100 %		100 %		100 %		100 %		100 %	

CLA – 4 can be from any combination of these: Assignments, Seminars, Tech Talks, Mini-Projects, Case-Studies, Self-Study, MOOCs, Certifications, Conf. Paper etc.,

Course Designers		
Experts from Industry	Experts from Higher Technical Institutions	Internal Experts
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