

PRASAD V. POTLURI SIDDHARTHA INSTITUTE OF TECHNOLOGY

(Autonomous)

Kanuru, Vijayawada-520007

Department of Computer Science and Engineering(Data Science)

III B.Tech–II Semester

Software Project Management

Course Code	23DS4602A	Year	III	Semester	II
Course Category	PEC	Branch	CSE (Data Science)	Course Type	Theory
Credits	3	L-T-P	3-0-0	Prerequisites	Software Engineering
Continuous Internal Evaluation	30	Semester End Evaluation	70	Total Marks	100

Course Outcomes

Upon Successful completion of course, the student will be able to		
CO1	Describe software project management principles, life-cycle models, economic considerations, and Agile–DevOps practices to understand effective end-to-end software project management.	L2
CO2	Apply iterative process models, life-cycle phases, workflows, and planning techniques to develop realistic cost, schedule, and resource plans for software projects.	L3
CO3	Use iterative life-cycle phases, workflows, Agile–DevOps practices, and planning techniques to develop realistic cost, schedule, and resource plans for software projects.	L3
CO4	Analyze iterative life-cycle phases, process workflows, project organization structures, metrics, and Agile–DevOps practices to evaluate software project planning and delivery effectiveness.	L4

Contribution of Course Outcomes towards achievement of Program Out comes & Strength of correlations (3: High,2: Medium, 1: Low)

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2
CO1	2												
CO2	3												
CO3	3												
CO4		3									2		

Syllabus		
Unit No	Content	Mapped CO
I	<p>Conventional Software Management: The waterfall model, conventional software Management performance.</p> <p>Evolution of Software Economics: Software Economics, pragmatic software cost estimation.</p> <p>Improving Software Economics: Reducing Software product size, improving software processes, improving team effectiveness, improving automation, Achieving required quality, peer inspections.</p>	CO1, CO2
II	<p>Conventional and Modern Software Management: The principles of conventional software Engineering, principles of modern software management, transitioning to an iterative process.</p> <p>Life cycle phases: Engineering and production stages, inception, Elaboration, construction, transition phases.</p> <p>Artifacts of the process: The artifact sets, Management artifacts, Engineering artifacts, programmatic artifacts.</p>	CO1, CO2, CO3
III	<p>Model based software Architectures: A Management perspective and technical perspective.</p> <p>Work Flows of the process: Software process workflows, Iteration workflows.</p> <p>Checkpoints of the process: Major mile stones, Minor Milestones, Periodic status assessments.</p> <p>Iterative Process Planning: Work breakdown structures, planning guidelines, cost and schedule estimating, Iteration planning process, Pragmatic planning</p>	CO1, CO2, CO3
IV	<p>Project Organizations and Responsibilities: Line-of-Business Organizations, Project Organizations, evolution of Organizations.</p> <p>Process Automation: Automation Building blocks, The Project Environment</p> <p>Project Control and Process Instrumentation: The seven core Metrics, Management indicators, quality indicators, life cycle expectations, pragmatic Software Metrics, Metrics automation.</p>	CO1, CO3 CO4
V	<p>Agile Methodology: -Adapting to Scrum, Patterns for Adopting Scrum, Iterating towards Agility.</p> <p>Fundamentals of DevOps: Architecture, Deployments, Orchestration, Need, Instance of applications, DevOps delivery pipeline, DevOps eco system.</p> <p>DevOps adoption in projects: Technology aspects, Agiling capabilities, Tool stack implementation, People aspect, processes</p>	CO1, CO3, CO4

Learning Resources
Text Books
<ol style="list-style-type: none"> 1. Software Project Management, Walker Rayce, first edition, 1998, Addison-Wesley Professional 2. Mike Cohn, Succeeding with Agile: Software Development Using Scrum, 1st Edition, Addison-Wesley Professional, 2009/2010.
Reference Books
<ol style="list-style-type: none"> 1. Software Engineering Project Management, Richard H. Thayer, Second Edition, 1997, IEEE Computer Society Press. 2. Software Engineering and Management, K.D. Shere, First Edition, 1998, Prentice-Hall of India (PHI). 3. Software Project Management: A Concise Study, S.A. Kelkar, Third Edition, 2012, PHI Learning Pvt. Ltd. 4. Software Project Management: From Concept to Deployment, Kieron Conway, First Edition, 2001, Coriolis Group Books.
e-Resources & other digital material
<ol style="list-style-type: none"> 1. Software Project Management: https://nptel.ac.in/courses/106105218.

