PVP 20

PRASAD V. POTLURI SIDDHARTHA INSTITUTE OF TECHNOLOGY

(Autonomous)

Kanuru, Vijayawada-520007

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING (AI&ML)

IV B.Tech I Semester

Software Project Management

Course Code	**20AM4701C**	**Year**	IV	**Semester**	I
Course Category	PE	**Branch**	CSE (AI&ML)	**Course Type**	Theory
Credits	03	**L-T-P**	3-0-0	**Prerequisites**	Software Engineering
Continuous Internal Evaluation	30	**Semester End Examination**	70	**Total Marks**	100

Course Outcomes		
Upon successful completion of the course, the student will be able to		
CO1	Describe software management practices and life cycle models to understand their application in development.	**L2**
CO2	Apply principles of software economics and estimation techniques to improve project planning, cost control, and team productivity.	**L3**
CO3	Apply software process components like workflows, artifacts, checkpoints, and model-based architectures to practical technical and managerial scenarios.	**L3**
CO4	Analyze project management techniques to effectively plan, organize, and control software projects using suitable structures, metrics, and tools.	**L4**

Contribution of course outcomes towards achievement of program outcomes & Strength of correlations (3: Substantial,2: Moderate,1: Slight)

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P010	PO11	PSO1	PSO2
CO1	2												
CO2	3												
CO3	3												
CO4		3									2		

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Syllabus		
Unit No.	**Contents**	**Mapped CO**
I	**Conventional Software Management**: The waterfall model, conventional software Management performance. **Evolution of Software Economics**: Software Economics, pragmatic software cost estimation. **Improving Software Economics**: Reducing Software product size, improving software processes, improving team effectiveness, improving automation, Achieving required quality, peer inspections.	CO1, CO2
II	**Conventional and Modern Software Management**: The principles of conventional software Engineering, principles of modern software management, transitioning to an iterative process. **Life cycle phases**: Engineering and production stages, inception, Elaboration, construction, transition phases.	CO1, CO2
III	**Artifacts of the process**: The artifact sets, Management artifacts, Engineering artifacts, programmatic artifacts. **Model based software Architectures**: A Management perspective and technical perspective. **Work Flows of the process**: Software process workflows, Iteration workflows.	CO3
IV	**Checkpoints of the process**: Major mile stones, Minor Milestones, Periodic status assessments. **Iterative Process Planning**: Work breakdown structures, planning guidelines, cost and schedule estimating, Iteration planning process, Pragmatic planning.	CO2, CO3
V	**Project Organizations and Responsibilities**: Line-of-Business Organizations, Project Organizations, evolution of Organizations. **Project Control and Process Instrumentation**: The seven core Metrics, Management indicators, quality indicators, life cycle expectations, pragmatic Software Metrics, Metrics automation.	CO4

Learning Resources
Text Books
1. Software Project Management, Walker Rayce, first edition, 1998, Addison-Wesley Professional.
Reference Books
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
1. Software Project Management: https://nptel.ac.in/courses/106105218