

PRASAD V. POTLURI SIDDHARTHA INSTITUTE OF TECHNOLOGY

(Autonomous)

Kanuru, Vijayawada-520007

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING (Data Science)

IV B Tech – I Semester (Data Science)

| Syllabus | | |
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| 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>