JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPUR

B.Tech (CSE)– III-I Sem

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(20A05504a) SOFTWARE PROJECT MANAGEMENT
(Professional Elective Course– I)

Course Objectives:

This course is designed to enable the students to understand the fundamental principles of Software Project management & will also have a good knowledge of the responsibilities of a project manager and how to handle them.

Course Outcomes:

After completion of the course, students will be able to

- Describe the fundamentals of Project Management
- Recognize and use Project Scheduling Techniques
- Familiarize with Project Control Mechanisms
- Understand Team Management
- Recognize the importance of Project Documentation and Evaluation

UNIT I Lecture 9Hrs

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.

UNIT II Lecture 9Hrs

The old way and the new: 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.

Artifacts of the process: The artifact sets, Management artifacts, Engineering artifacts, programmatic artifacts

UNIT III Lecture 9Hrs

Work Flows of the process: Software process workflows, Inter Trans workflows.

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

UNIT IV Lecture 9Hrs

Process Automation: Automation Building Blocks, The Project Environment.

Project Control and Process instrumentation: The seven core Metrics, Management indicators, quality indicators

Tailoring the Process: Process discriminants. Managing people and organizing teams.

UNIT V Lecture 9Hrs

Project Organizations and Responsibilities: Line-of-Business Organizations, Project Organizations, evolution of Organizations.

Future Software Project Management: modern Project Profiles, Next generation Software economics, modern process transitions.

Case Study: The Command Center Processing and Display System-Replacement (CCPDS-R)

Textbooks:

1. Software Project Management, Walker Royce, Pearson Education, 2012
2. Bob Hughes, Mike Cotterell and Rajib Mall "Software Project Management", 6th Edition, McGraw Hill Edition, 2017

Reference Books:

1. PankajJalote, "Software Project Management in practice", 5th Edition, Pearson Education, 2017.
2. Murali K. Chemuturi, Thomas M. Cagley Jr." Mastering Software Project Management: Best Practices, Tools and Techniques", J. Ross Publishing, 2010
3. Sanjay Mohapatra, "Software Project Management", Cengage Learning, 2011

Online Learning Resources:

http://nptel.ac.in/courses/106101061/29