NARSIMHA REDDY ENGINEERING COLLEGE
UGC AUTONOMOUS INSTITUTION
Maisammaguda (V), Kompally - 500100, Secunderabad, Telangana state, India

Accredited by NBA & NAAC with 'A' Grade
Approved by AICTE
Permanently affiliated to JNTUH

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

SYLLABUS:

NR20- SOFTWARE PROJECT MANAGEMENT
(Professional Elective- V)

B.Tech. IV Year I Semester							
Course Code	**Category**	**Hours / Week**			**Credits**	**Maximum Marks**	
CS4116PE	**Elective**	**L**	**T**	**P**	**C**	**CIA**	**SEE**	**Total**
		3	**0**	**0**	**3**	**25**	**75**	**100**
Contact classes: 60	**Tutorial Classes : NIL**	**Practical classes : NIL**				**Total Classes :60**	
Prerequisites: A course on " Software Engineering "							

Course Objectives:

- To understand the Software Project Planning and Evaluation techniques.

- To plan and manage projects at each stage of the software development life cycle (SDLC).

- To learn about the activity planning and risk management principles.

- To manage software projects and control software deliverables.

- To develop skills to manage the various phases involved in project management and people management.

- To deliver successful software projects that support organization's strategic goals

Course Outcomes:

- Analyze the Principles of Software Process Change

- Gain knowledge of software economics, phases in the life cycle of software development, project organization, project control and process instrumentation

- Analyze the major and minor milestones, artifacts and metrics from management and technical Perspective.

- Design and develop software product using conventional and modern principles of software project management

- Implement a project to manage project schedule, expenses and resources with the application of suitable project management tools

MODULE- I

Software Process Maturity Software maturity Framework, Principles of Software Process Change, Software Process Assessment, The Initial Process, The Repeatable Process, The Defined Process, The Managed Process, The Optimizing Process. Process Reference Models Capability Maturity Model (CMM), CMMI, PCMM, PSP, TSP).

MODULE- II

Software Project Management Renaissance

Conventional Software Management, Evolution of Software Economics, Improving Software Economics, The old way and the new way.

Life-Cycle Phases and Process artifacts Engineering and Production stages, inception phase, elaboration phase, construction phase, transition phase, artifact sets, management artifacts, engineering artifacts and pragmatic artifacts, model-based software architectures.

MODULE- III

Work flows and Check points of process Software process work flows, Iteration work flows, Major milestones, minor mile stones, periodic status assessments.

Process Planning Work break down structures, Planning guidelines, cost and schedule estimating process, iteration planning process, Pragmatic planning.

MODULE- IV

Project Organizations Line-of- business organizations, project organizations, evolution of organizations, process automation. Project Control and process instrumentation

The seven-core metrics, management indicators, quality indicators, life-cycle expectations, Pragmatic software metrics, metrics automation.

MODULE- V

CCPDS-R Case Study and Future Software Project Management Practices Modern Project Profiles, Next-Generation software Economics, Modern Process Transitions.

TEXT BOOKS:

1. Managing the Software Process,Watts S.Humphrey, Pearson Education
2. Software Project Management, Walker Royce, Pearson Education

REFERENCE BOOKS:

1. An Introduction to the Team Software Process, Watts S.Humphrey, Pearson Education,2000
2. Process Improvement essentials, JamesR.Persse,O'Reilly, 2006
3. Software Project Management,Bob Hughes & Mike Cotterell, fourth edition, TMH, 2006
4. Applied Software Project Management, Andrew Stellman & Jennifer Greene, O'Reilly, 2006.
5. Head First PMP, Jennifer Greene & Andrew Stellman, O'Reilly, 2007
6. Software Engineering Project Management, Richard H.Thayer & Edward Yourdon, 2nd edition, Wiley India,2004.
7. Agile Project Management, Jim High smith, Pearson