

## SREENIVASA INSTITUTE of TECHNOLOGY and MANAGEMENT STUDIES

II MCA - II Semester

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**16MCA224A**

**SOFTWARE PROJECT MANAGEMENT**

### Course Objectives:

- The student should be made to understand the overview of software project management, project planning and Step Wise framework in project planning.
- The students should be made to learn about how to assess the projects and to find the cost of the project using cost benefit evaluation techniques and to evaluate the risks involved in the project.
- The student should be made to understand the activity plan for a project and to estimate the overall duration of the project by analyzing the risks involved in it.
- The student should be made to learn how to monitor the progress of projects and to assess the risk of slippage so that project's requirements can be controlled.
- To identify the factors that influence people's behavior in a project environment and selection of appropriate people for the project, continual training and learning to improve group working to select appropriate leadership styles.

### Syllabus:

#### UNIT 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.

#### UNIT II : 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 : Model based software architectures

A Management perspective and technical perspective. Work Flows of the process : Software process workflows, Iteration 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.

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

#### **UNIT IV : Process Automation**

Automation Building blocks, The Project Environment.

Project Control and Process instrumentation : The seven core Metrics, Management indicators, quality indicators, life cycle expectations, pragmatic Software Metrics, Metrics automation.

Tailoring the Process : Process discriminants.

#### **UNIT V: Future Software Project Management**

Modern Project Profiles, Next generation Software economics, modern process transitions.

Case Study: The COCOMO Cost Estimation Model.

#### **Course Outcome :**

- The student should be able to plan the project in stepwise manner.
- The student should be able to apply cost benefit evaluation techniques to find the cost of the project and to evaluate the risk of project.
- The student should be able to know activity plan for a project and to estimate the overall duration of the project.
- The student should be able to monitor the progress of projects and to assess the risk of slippage.
- The student should be able to identify the factors that influence people's behavior in a project environment and selection of appropriate people for the project and to improve group working.

#### **TEXT BOOK :**

1. Software Project Management, Walker Royce: Pearson Education, 2005.

#### **REFERENCES :**

1. Software Project Management, Bob Hughes and Mike Cotterell: Tata McGraw-Hill Edition.
2. Software Project Management, Joel Henry, Pearson Education.
3. Software Project Management in practice, Pankaj Jalote, Pearson Education.2005.