

# Software Project Management

## Course Objectives

This course describes the key aspects of software project and provide introduction to Plan, manage, execute and evaluate control software projects at each stage of the software development life cycle (SDLC). The subject also focus on areas like managing software cost and schedule during development; risk engineering; and continuous process improvement. This course introduces software engineers aspiring to become software project managers to the responsibilities of these roles.

## Syllabus

Introduction to software project management, Project scheduling, Risk Management, Project Life cycle, Effort and software cost estimations, COCOMO models, Managing people, Monitoring and control of projects Expected Outcomes

On completion of the course students will acquire knowledge about managing software projects and will be able to overcome challenges associated with software projects and finally help them to successfully lead such projects in today's complex systems environment. References

1. Bob Hughes, Mike Cotterell, "Software Project Management", Third Edition, Tata McGraw Hill, 2004.
2. Ramesh, Gopalaswamy, "Managing Global Projects", Tata McGraw Hill, 2001.
3. Royce, "Software Project Management", Pearson Education, 1999.
4. Jalote, "Software Project Management in Practice", Pearson Education, 2002.

## Course Plan

I INTRODUCTION TO SOFTWARE PROJECT MANAGEMENT- Project Definition — Activities covered By Software Project Management – Requirement Specification- Overview of Project Planning – Stepwise Project Planning

II ACTIVITY PLANNING- Objectives – Project Schedule – Sequencing and Scheduling Activities – Shortening Project Duration – Activity on Arrow Networks – Risk Management – Managing Risk

First series examination

III PROJECT LIFE CYCLE AND EFFORT ESTIMATION Software process and Process Models – Choice of Process models – mental delivery – Rapid Application development – Agile methods – Extreme Programming – SCRUM – Managing interactive processes

IV Basics of Software estimation – Effort and Cost estimation techniques COCOMO II A Parametric Productivity Model – Staffing Pattern.

Second Series Examination

V MANAGING PEOPLE AND ORGANIZING TEAMS Introduction –Working In Groups – Becoming A Team –Decision Making – Leadership – Organizational Structures – Stress –Health And Safety – Case Studies.

VI MONITORING AND CONTROL Creating Framework – Collecting The Data – Visualizing Progress – Cost Monitoring –Getting Project Back To Target – Change Control – Managing Contracts

Final Examination