

# Syllabus

## Software Project Management

BCA (4<sup>TH</sup> SEMESTER)-16-403

**Objective:** To teach the students important concepts, terms related to various phases during the development of a software project. At the end of the course the student will be able to apply software project management techniques to manage a software project.

### Note :

- (i) The Question Paper will consist of Four Units.
- (ii) Examiner will set total of NINE questions comprising TWO questions from each Unit and ONE compulsory question of short answer type covering whole syllabi.
- (iii) The students are required to attempt ONE question from each Unit and the Compulsory question.
- (iv) All questions carry equal marks unless specified.

### UNIT - I

**Software Project Management and Process Groups:** Introduction to project and project management, role of a project manager in project management, a system view of project management, Stakeholders of Project, Project phases and product life cycles, Evolution of software economics, Improving software economics: reducing product size, software processes, team effectiveness, automation through software environments, Principles of modern software management.

### UNIT - II

**Project Management Framework:** Project Management Framework, Software Tools for Project Management, Issues in Project Staff Acquisition and Team formation and

Development, Model based software architectures, Workflows of the process, Checkpoints of the process.

**Project Integration:** Integration Management: Project selection, project management plans, project execution, project monitoring and controlling, integrated change control;

### UNIT - III

**Scope Management:** Scope Management: project scope statement, Work breakdown structures, Scope verification and scope control, Process instrumentation and seven core metrics.

**Software management disciplines:** Iterative process planning, Project organizations and responsibilities, Process automation.

## UNIT - IV

**Project Scheduling:** Time Management; Importance of Project Schedules, Sequencing and Scheduling Activity, Project Network Diagrams, PERT/CPM, Gantt charts, Critical chain scheduling.

**Cost Management:** Project Cost Management - Importance and Principles of Project Cost Management, Resource Planning, Cost Estimating Techniques and. Expert Judgment, Estimating by Analogy, COCOMO Model, Cost Budgeting and Control