BA5023 SOFTWARE PROJECT MANAGEMENT AND QUALITY

DETAILED SYLLABUS

UNIT I PROJECT MANAGEMENT OVERVIEW

What is Project and Project Management, Various phase of Project Management, Project Stakeholders, Project Management Organisation (PMO); Roles and Responsibilities of Project Manager. Brief introduction to various process models - Waterfall, RAD, V, Spiral, Incremental, Prototyping, Agile– SCRUM, Extreme Programming (XP) and Kanban Project Initiation **-** Project Charter; Statement of Work (SoW)

UNIT II PROJECT PLANNING

Project Planning Activities- Project Scope, Work Breakdown Structures (WBS), Software estimation methodologies - COCOMO Model and Function Point Project Scheduling Techniques **–** Program Evaluation and Review Technique (PERT), Gantt Chart and Critical Path Method (CPM)

UNIT III PROJECT TRACKING

Monitoring and Control, Project Status Reporting; Project Metrics; Earned Value Analysis (EVA); Project Communication Plan & Techniques; Steps for Process Improvement.

Risk Management**:** Concepts of Risks and Risk Management; Risk Management Activities; Effective Risk Management; Risk Categories; Aids for Risk Identification; Potential Risk Treatments; Risk Components and Drivers; Risk Prioritization.

UNIT IV PROJECT CLOSURE

Project Closure Analysis, Lesson Learnt Software Quality Assurance-Software Quality Assurance Activities; Software Qualities; Software Quality Standards – ISO Standards for Software Organization, Capability Maturity Model (CMM), Comparison between ISO 9001 & SEI CMM, Other Standards.

UNIT V AGILE PROJECT MANAGEMENT WITH SCRUM

Agile Manifesto and Agile Principles Agile Scrum - Purpose, Values, Scrum Framework, Scrum Roles – Product Owner, Scrum Master & Team, Scrum Events – Sprint Planning, Daily Scrum/Stand-up Meeting, Sprint Review, Sprint Retrospective, Scrum Artefacts – Product Backlog, Sprint Backlog, Increment and Definition of Done (DoD), Agile estimation – Story Point.

REFERENCES

1. Bob Hughes and Mike Cotterell, Software Project Management, Tata McGraw Hill, 5th Edition.
2. Jalote, “Software Project Management in Practice”, Pearson Education.
3. Ramesh, Gopalaswamy, "Managing Global Projects", Tata McGraw Hill.
4. Ken Schwaber, Agile Project Management with Scrum, Microsoft Press.
5. Mike Cohn, Agile Estimating & Planning, Pearson.
6. Royce, “Software Project Management”, Pearson Education, 1999.

OBJECTIVES

- To understand the various project management phases – Initiation, Planning, Tracking and Closure.
- To study various project estimation methodologies, process models and risk management.
- To understand quality assurance in software development.