

PIT6J009 OBJECT ORIENTED SOFTWARE ENGINEERING

Module1

Software life cycle models: Water fall, RAD, Spiral, Open-source, Agile process, Understanding software process, Process metric, Planning & Estimation, Product metrics , Estimation- LOC, FP, COCOMO models, Project Management, Planning, Scheduling, Tracking, CMM levels

Module2

Workflow of Software life cycle, Requirement Workflow, Functional , Nonfunctional, Characteristics of Requirements, Requirement Elicitation Techniques, Requirement Documentation – Use case specification, Activity Diagram, Analysis workflow, Static Analysis, Identifying Object – Methods of identifying objects and types -Boundary, Control, Entity, Dynamic Analysis, Identifying Interaction – Sequence and Collaboration diagrams, State chart diagram, Design Workflow, System Design Concept – Coupling and Cohesion, Architectural Styles, Identifying Subsystems and Interfaces, Design Patterns

Module 3

Implementation Workflow, Mapping models to Code, Mapping Object Model to Database Schema, Testing, Walkthrough and Inspection, Unit Testing, Integration, System and Regression Testing, User Acceptance Testing, Software Quality – Quality Standards , Quality Matrices Testing & SQA: FTR, unit testing, integration testing, product testing, and acceptance testing

Module4

Software Configuration Management, Managing and controlling Changes, Managing and controlling versions, Maintenance, Types of maintenance, Maintenance Log and defect reports, Reverse and re-engineering

Text Books:

1. Bernd Bruegge, "Object oriented software engineering", Second Edition, Pearson Education
2. Stephan R. Schach, "Object oriented software engineering", Tata McGraw Hill.
3. Roger Pressman, "Software Engineering", sixth edition, Tata McGraw Hill.

References:

1. Timothy C. Lethbridge, Robert Laganier " Object-Oriented Software Engineering