

Lesson Plan for the Odd Semester (Session 2020-21)

SUBJECT: Software Engineering

Class: B.C.A. 3rd Semester

Name of Teacher: Mr. Bhoop Singh

Month	Syllabi to be covered
August	Software Crisis – problem and causes, Software life cycle models: Waterfall, Prototype, Evolutionary and Spiral models. Software Project Planning: Cost estimation: COCOMO model, Putnam Resource Allocation Model, Risk management, project scheduling, personnel planning, team structure, Software configuration management, quality assurance, project monitoring.
September	Software Requirement Analysis and Specifications: Structured Analysis, Data Flow Diagrams, Data Dictionaries, Entity-Relationship diagrams, Software Requirement and Specifications, Behavioral and non-behavioral requirements.
October	Software Design: Design fundamentals, problem partitioning and abstraction, design methodology, Cohesion & Coupling, Classification of Cohesiveness & Coupling. Coding: Programming style, structured programming.
November	Software Testing: Testing fundamentals, Functional testing: Boundary Value Analysis, Equivalence class testing, Decision table testing, Cause effect graphing, Structural testing: Control flow based and data flow based testing, loop testing;
December	Software testing strategies: unit testing, integration testing, Validation testing, System testing, Alpha and Beta testing. Software Maintenance: Type of maintenance, Management of Maintenance, Maintenance Process, maintenance characteristics.