

Lesson Plan for B.Sc 6th Sem (Session 2023-24)

Assistant Professor: Dr. Rajesh Dawar

Subject: 6.2 Software Engineering

Month	Week	Description
January	Week 1	Introduction to SE, Software characteristics, Software crisis
	Week 2	Software Life Cycle Models-Waterfall, prototype, evolutionary
	Week 3	Spiral Model. SE paradigms
	Week 4	Goals and Principles of SE
February	Week 1	Software Requirement Analysis-Structured Analysis.
	Week 2	Object Oriented Analysis and Data Modelling
	Week 3	SRS specification, Validation
	Week 4	Software Requirement Analysis and Specification, requirement analysis using DFD, Data Dictionaries and ER Diagrams Test-1
March	Week 1	Requirement Documentation, nature of SRS, characteristics, and org. of SRS
	Week 2	Software Project Management-Planning a Soft. Project
	Week 3	Software Cost Estimation, Project Scheduling, team structure and personal planning Assignment-1
	Week 4	HOLI BREAK
April	Week 1	Soft. design fundamentals, software des. Principles
	Week 2	Cohesion and coupling and its classification.
	Week 3	Function Oriented Design, Object Oriented Design.
	Week 4	Design verification, monitoring and Control Test-2

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Subject: 6.1 Visual Basic

Month	Week	Description
January	Week 1	Introduction to Visual and Non-Visual Prog.
	Week 2	Introduction to Procedural, Object Oriented and Event Driven Prog., Introduction to VB Environment
	Week 3	Different Windows in VB, Event Driven Prog.
	Week 4	Variables, Declaration of Variables, types of variables in VB
February	Week 1	Converting variable types, user defined data types
	Week 2	Scope and lifetime of variables, Names and intrinsic constants
	Week 3	Operators in VB, various controls of I/o in VB.
	Week 4	Message Box, Input Box and Print statements in VB, Test-1
March	Week 1	Conditional statements in VB
	Week 2	Looping statements in VB
	Week 3	Nested Control Structures, Introduction to Arrays – 1D , 2-D, Dynamic Arrays
	Week 4	HOLI BREAK Assignment-1
April	Week 1	General and Event Procedures, Functions, Calling Functions
	Week 2	Passing arguments to functions, optional arguments, Named Arguments.
	Week 3	Working with Forms, MDI, Activate and deactivate events, Form Load Event, Menu Designing in VB
	Week 4	Database Prog, using DAO and ADO, Simple Active X Controls Test-2

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Lesson Plan for BCA 2nd Sem (Session 2023-24)

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Subject: BCA-107 Logical Organization of Computer-II

Month	Week	Description
January	Week 1	Characteristics of Sequential circuits, Introduction to Flip Flops
	Week 2	Flip flops- Clocked RS, D type, JK, T and Master Slave Flip Flops
	Week 3	State table, state diagram and state equations
	Week 4	Flip Flop Excitation Tables. Test-1
February	Week 1	Designing Registers-SISO , SIPO, PISO and PIPO
	Week 2	Shift Registers, Designing Synchronous and Asynchronous Counters
	Week 3	Binary Counters, Modulo N Counters and Up Down Counters
	Week 4	Revision of Unit-I and II Test-2
March	Week 1	Memory and IO Devices, Memory parameters, Semi conductor RAM, ROM
	Week 2	Magnetic and optical storage devices
	Week 3	Flash Memory, IO Devices and their controllers Assignment-1
	Week 4	HOLI BREAK
April	Week 1	Machine instruction, instruction set selection, instruction cycle
	Week 2	Instruction format and addressing modes. IO Interface, Interrupt structures
	Week 3	Program Controlled, Interrupt Controlled and DMA transfers, IO Channels and IOP
	Week 4	Revision and Test-3

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Lesson Plan for BCA 2nd Sem(Session 2023-24)

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Subject: BCA-109 Structured System Analysis and Design

Month	Week	Description
January	Week 1	Definition and characteristics of System, Elements of System, Type of System
	Week 2	SDLC, Role of System Analyst, Analyst/user interface
	Week 3	Introduction to system planning and initial investigation, basis for planning in system analysis.
	Week 4	Fact Finding, information gathering tools, fact analysis, determination of feasibility. Test-1
February	Week 1	Tools of Structured Analysis-DFD, Data Dictionary
	Week 2	Flow Charts, Gantt Charts, decision trees, decision tables, structured English, Pros and Cons of each tool.
	Week 3	Introduction to feasibility study, its objectives, types of feasibility, steps in feasibility analysis, feasibility report, oral presentation.
	Week 4	Cost and benefit analysis, identification of cost and benefits, its classification, methods of determining costs and benefits, interpreting results of analysis and take final action. Test-2
March	Week 1	Objectives of System Design, Logical and Physical design, design methodologies
	Week 2	Structured Design, Form Driven methodology, structured walkthrough
	Week 3	Input Design, Objectives of input design, Output Design, objectives of output design, form design, classification of forms, requirement of Form design, types of forms, layout considerations, Form Control. Assignment-1
	Week 4	HOLI BREAK
April	Week 1	Introduction to system testing, objectives of testing, test plan, testing techniques
	Week 2	Quality Assurance Goals in SDLC, System implementation, Process of implementation, System Evaluation
	Week 3	System evaluation, System maintenance and its types
	Week 4	System documentation and forms of documentation. Revision and Test-3

Lesson Plan for B.SC 2nd Sem(Session 2023-24)

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Subject: 2.1 Programming in C

Month	Week	Description
January	Week 1	Basic concepts of programming techniques of problem solving-algorithms, flowcharting.
	Week 2	Concept of structured programming, top down design, development of efficient program, program correctness
	Week 3	Debugging and testing of programs, algorithms for searching
	Week 4	Algorithms for sorting, merging of ordered List Test-1
February	Week 1	History of C, importance of C, structure of C Program, elements of C, C Character set
	Week 2	Identifiers and keywords, data types in C, operators in C, hierarchy of operators
	Week 3	IO statements, arithmetic expression, evaluation of arithmetic expression, type casting and conversion.
	Week 4	Conditional statements in C with example programs. Test-2
March	Week 1	Looping statements in C with example programs.
	Week 2	Jumps in Loops, break, continue with example prog.
	Week 3	Function definition, prototyping, passing parameters to functions, Recursion. Assignment-1
	Week 4	HOLI BREAK
April	Week 1	Declaration of pointers, operations on pointers, array of pointers, pointers to arrays.
	Week 2	Introduction to arrays 1-D and 2-D, creating programs for searching and sorting, Pointers and arrays.
	Week 3	String handling, String functions, Structures and unions.
	Week 4	Standard I/O, Reading and writing a file. Revision and Test-3