

Govt. College for Women Sirsa

LESSON PLAN 2023-24 (Even Semester)


Department of Computer (Even Sem)

Teachers Name: Dr. Pardeep Kumar

Programme Name: B.Sc/BA-1st Year

Course Name: Computer Science/ Applications (OS)

Weeks	Topics	Assignments /Test
Week 1	Unit – 1: Introduction, What is an Operating System, Simple Batch Systems, Multiprogrammed Batches systems, Time-Sharing Systems, Personal-computer systems	
Week 2	Parallel systems, Distributed Systems, Real-Time Systems Memory Management: Background, Logical versus Physical Address space,	
Week 3	UNIT 1 : swapping ,Contiguous allocation, Paging, Segmentation Virtual Memory: Demand Paging, Page Replacement, Page-replacement Algorithms,	
Week 4	UNIT – I : Performance of Demand Paging, Allocation of Frames, Thrashing, Other Considerations	
Week 5	UNIT – II Processes: Process Concept, Process Scheduling,	
Week 6	UNIT – II : Operation on Processes CPU Scheduling: Basic Concepts, Scheduling Criteria, Scheduling Algorithms,	
Week 7	UNIT – II Multiple Processor Scheduling, Process Synchronization: Background, The Critical-Section Problem, Synchronization Hardware,	
Week 8	UNIT – II Semaphores ,Classical Problems of Synchronization	
Week 9	UNIT -III Deadlocks: System Model, Deadlock Characterization, Methods for Handling Deadlocks,	
Week 10	UNIT -III Deadlock Prevention, Deadlock Avoidance, Deadlock Detection, Recovery from Deadlock Device Management	
Week 11	UNIT -III Techniques for Device Management, Dedicated Devices, Shared Devices, Virtual Devices; Input or Output Devices, Storage Devices, Buffering,	
Week 12	UNIT -III Secondary Storage Structure: Disk Structure, Disk Scheduling, Disk Management, Swap-Space Management, Disk Reliability.	
Week 13	UNIT-IV Information Management: Introduction, A Simple File System, General Model of a File System,	
Week 14	UNIT -IV Symbolic File System, Basic File System, Access Control Verification, Logical File System, Physical File	
Week 15	UNIT -IV System File-System Interface: File Concept, Access Methods, Directory Structure, Protection,	
Week 16	UNIT -IV Consistency Semantics File-System Implementation: File System Structure, Allocation Methods, Free space management	
Week 17	Revision of Syllabus	

Test and Assignment will be given according to  students performance and syllabus.

Teachers Name: Dr. Pardeep Kumar

Programme Name: B.Sc./BA-1st Year

Course Name: Computer Science/ Applications

Subject Name: programming in C

Weeks	Topics	Assignments /Test
Week 1	UNIT-I Planning the Computer Program: Concept of problem solving, Problem definition, Program design	
Week 2	UNIT-I Compilation and Executing a C program, , Types of errors in programming, Techniques of Problem Solving: Flow-chart, algorithms, pseudo code, Structured programming concepts, History of C	
Week 3	UNIT-I Importance of C, Structure of a C Program, use of main() function, use of library functions and header files, introduction to preprocessor directives, compilation process of a c program,	
Week 4	UNIT-I, C character set, identifiers and keywords, data types and their memory requirements, constants and variables, scope of a variable, assignment statement, unformatted & formatted I/O	
Week 5	UNIT-II Arithmetic (Unary & Binary), Relational, Logical, Bitwise, and Conditional operators. Arithmetic expressions, evaluation of arithmetic expressions, understanding operators	
Week 6	UNIT-II precedence and associativity in expression evaluation, type casting and conversion, conditional statements, iterative/looping statements, break and continue, go to statement.	
Week 7		
	UNIT-II Functions: Prototype, Declaration and Definition of a function, Arguments/Parameters in Functions, Functions with variable number of Arguments, Utility of functions, Recursion.	
Week8	UNIT-II Storage classes in C: auto, extern, register and static storage class, their scope, storage, lifetime.	
Week 9	UNIT-III Arrays: Definition, Creating and Using One Dimensional Arrays, Initializing an Array,	
Week 10	UNIT-III Accessing individual elements in an Array, Manipulating array elements using loops, Two dimensional Arrays: memory representation schemes: row major, column major. Simple programs	
Week 11	UNIT-III Introduction to Multi-dimensional arrays. Understanding a Pointer Variable, Simple use of Pointers	
Week 12	UNIT-III Pointer arithmetic. Pointers to Pointers, Problems with Pointers, passing pointers as function arguments, Call by Reference, Pointers and Arrays,. Pointers and strings,	
Week 13	UNIT-IV String, String I/O, Array and strings,	
Week 14	UNIT-IV reading and writing strings, String manipulation	
Week 15	UNIT-IV functions: String length, copy, compare, concatenate etc. Understanding utility of structures, declaring,	
Week 16	UNIT-IV initializing and using simple structures, Manipulating individual members of structures	
Week 17	Revision of Syllabus	

Teachers Name: Dr. Pardeep Kumar **Programme Name:** B.Sc/BA- 2nd Year **Course Name:** Computer Science/ Applications (SOFTWARE ENGINEERING)

Weeks	Topics	Assignments /Test
Week 1	Unit-I introduction of Software and software engineering,	
Week 2	Unit-I Software characteristics,	
Week 3	Unit-I software crisis, Software Life cycle	
Week 4	Unit-I software engineering paradigms.	
Week 5	Unit-II Software requirement analysis	
Week 6	Unit-II structured analysis, object oriented analysis	
Week 7	Unit-II software requirement specification, Tools for requirement analysis,	
Week 8	Unit-II Software cost estimation, Project scheduling, Personnel Planning, team structure	
Week 9	Unit-III Design and implementation of software	
Week 10	Unit-III software design fundamentals, Structured design methodology and Object Oriented design, design verification	
Week 11	Unit-III Software Reliability - metric and specification	
Week 12	Unit-III fault avoidance and tolerance, exception handling, defensive programming.	
Week 13	Unit-IV Testing - Testing fundamentals,	
Week 14	Unit-IV white box and black box testing, software testing strategies: unit testing	
Week 15	Unit-IV validation testing, system testing, debugging	
Week 16	Unit-IV Software maintenance - maintenance characteristics, maintainability, maintenance tasks, maintenance side effects. Software configuration management: Project monitoring, RiskManagement.	

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LESSON PLAN 2023-24 (Even Semester)

Department of Computer (Even Sem)

Teachers Name: Dr. Pardeep Kumar

Programme Name: B.Sc/BA- 3rd Year

Course Name: Computer Science/ Applications (INTRODCUTION TO LINUX)

Weeks	Topics	Assignments /Test
Week 1	Unit-I Unix Operating System, Knowing Your Machine,	
Week 2	Unit-I Linux and GNU, The Unix architecture/Linux features,	
Week 3	Unit-I Command Usage, General Purpose Utilities: cal, date, echo, printf, bc, script, Email basics, passwd, who, uname, tty, stty, file system.	
Week 4	Unit-I Linux Startup , Accounts, accessing Linux – starting and shutting processes, logging in and logging out.	
Week 5	Unit-II introduction of Handling Ordinary Files	
Week 6	Unit-II cat, cp, rm, mv, more, lp, file, wc, od, cmp, comm, diff, gzip and gunzip, tar, zip and unzip etc., tee	
Week 7	Unit-II Basic File Attributes	
Week 8	Unit-II- ls, file permissions, Directory Permissions, vi editor, The process, More file Attributes.	
Week 9	Unit-III Simple Filters	
Week 10	Unit-III head, tail, cut, paste, sort,	
Week 11	Unit-III Filters using Regular Expressions- grep and sed.	
Week 12	Unit-III uniq, doubts	
Week 13	Unit-IV awk- An advanced filter- Simple filtering,	
Week 14	Unit-IV splitting into fields, variables and expressions , perl- The master Manipulator-	
Week 15	Unit-IV preliminaries, chop function, string handling functions split	
Week 16	Unit-IV Process Control- pipe, signal, kill process.	
Week 17	Revision of Syllabus	