

Lesson Plan

Name of the Faculty Mr. Sumit

Discipline :CSE

Semester :4th

Subject :Operating System

Lesson Plan Duration: 15 weeks (from January, 2019 to June, 2019)

** Work (Lecture/Practical) per week (In Hours):Lecture -06 (Of Two Sections)- 03 Lab of One Section

Week	Lecture Day	Topic (including assignment/test) (In Each Section)
1	1	Introduction to os,operating system functions
	2	Different types of O.S.: batch process, multi-programmed, time-sharing, real-time,
	3	distributed, parallel os
2	1	Computer system operation, I/O structure, storage structure
	2	Storage hierarchy, different types of protections
	3	Operating system structure (simple, layered, virtual machine)
3	1	O/S services, system calls
	2	CPU scheduling: Scheduling criteria, preemptive & non-preemptive scheduling
	3	Assignmnet-1/Test/Revision
4	1	Algorithm evaluation, multi-processor scheduling
	2	Threads: Overview, benefits of threads
	3	user and kernel threads
5	1	Process Management: Concept of processes, process states
	2	process control, co-operating processes
	3	Assignmnet-1/Test/Revision
6	1	Inter-process communication.
	2	Process Synchronization: background, critical section problem
	3	Critical region, synchronization hardware
7	1	Classical problems of synchronization
	2	Semaphores.
	3	Deadlocks: Concept of deadlock
8	1	Deadlock characterization, deadlock prevention
	2	Deadlock avoidance, deadlock detection
	3	Recovery from deadlock
9	1	Memory Management: background, logical vs. physical address space
	2	Contiguous memory allocation, paging
	3	Segmentation, segmentation with paging. Concept of fragmentation
10	1	Virtual Memory: background, demand paging
	2	Concept of page replacement, page replacement algorithms
	3	Allocation of frames, thrashing
11	1	File Systems: file concept, file organization and access methods
	2	Allocation methods, directory structure
	3	Free-space management
12	1	I/O Management: I/O hardware, polling, interrupts
	2	DMA
	3	Assignmnet-2/Test/Revision
13	1	Kernel I/O subsystem (scheduling, buffering, caching, spooling and device reservation)
	2	Disk Management: disk structure

	3	Disk scheduling (FCFS, SSTF, SCAN,C-SCAN)
14	1	Disk reliability
	2	Performance parameters
	3	Assignmnet-3/Test/Revision
15	1	Goals of protection and security, security attacks, authentication
	2	Program threats, system threats, threat monitoring.
	3	Case studies: UNIX file system, Windows file system

Lesson Plan

Name of the Faculty Mr. Bharat Bhushan

Discipline : B.Tech Computer Science and Engineering

Semester :4th

Subject : Object oriented Programming (CSE-202N) and (CSE-212N)

Lesson Plan Duration: 15 weeks (from January, 2019 to June, 2019)

**** Work (Lecture/Practical) per week (In Hours):**Lecture -03 and 03 Lab of One Section

Week	Lecture Day	Topic (including assignment/test) (In Each Section)
1	1	UNIT 1: Introduction to C++, C++ Standard Library, Basics of a Typical C++ Environment, Pre-processors Directives, Illustrative Simple C++ Programs, Header Files and Namespaces, library files.
	2	Concept of objects, basic of object modeling, object classes, associations, behaviors, description
	3	Object Oriented Concepts: Introduction to Objects and Object Oriented Programming, Encapsulation Information Hiding, Access Modifiers: Controlling access to a class, method, or variable (public, protected, private, package
2	1	Polymorphism: Overloading, Inheritance, Overriding Methods, Abstract Classes, Reusability, Class's Behaviors.
	2	Classes and Data Abstraction: Introduction, Structure Definitions, Accessing Members of Structures,
	3	Class Scope and Accessing Class Members, Separating Interface from Implementation,
3	1	Initializing Class Objects: Constructors, Using Default Arguments With Constructors, Using Destructors,

	2	Classes : Const(Constant) Object And Const Member Functions, Object as Member of Classes, Friend Function and Friend Classes,
	3	Using This Pointer, Dynamic Memory Allocation with New and Delete,
4	1	
	2	Static Class Members, Container Classes And Integrators, Proxy Classes, Function overloading.
	3	Object Oriented Analysis & Object Modeling techniques,
5	1	Unit 2: Operator Overloading: Introduction, Fundamentals of Operator Overloading,
	2	Restrictions On Operators Overloading, Operator Functions as Class Members vs. as Friend
	3	Overloading, <<, >> Overloading Unary Operators, Overloading Binary Operators.
6	1	Introduction, Inheritance: Base Classes And Derived Classes, Protected Members, Casting Base- Class Pointers to Derived- Class Pointers,
	2	Using Member Functions, Overriding Base –Class Members in a Derived Class, Public,
	3	Using Constructors and Destructors in derived Classes, Implicit Derived – Class Object To Base- Class Object Conversion, .
7	1	UNIT 3: Virtual Functions and Polymorphism: Introduction to Virtual Functions, Abstract
	2	Base Classes and
	3	Polymorphism, New Classes and Dynamic Binding, Virtual Destructors, .
8	1	Files and I/O Streams: Files and Streams, Creating a Sequential Access File, Reading Data From A Sequential Access File,
	2	Random Access Files, Creating A Random Access File, Writing Data Randomly To a
	3	Random Access File, Reading Data Sequentially from a Random Access File.
9	1	Stream Input/Output Classes and Objects, Stream Output, Stream Input,
	2	Unformatted I/O (with read and write), Stream Manipulators, Stream Format States, Stream Error States.
	3	UNIT 4: Templates & Exception Handling:, Class Template, Class Templates and Non-Type
10	1	Parameters,
	2	Templates and Inheritance, Templates and Friends,
	3	Templates and Static Members. , Introduction,
11	1	Basics of C++ Exception Handling: Try Throw, Catch,
	2	Throwing an Exception, Catching an Exception,
	3	Re-throwing an Exception,
12	1	Exception specifications,
	2	Constructors, Destructors and Exception Handling, Exceptions and Inheritance.
	3	Function Templates, Overloading Template Functions
13	1	Processing Unexpected Exceptions, Stack Unwinding,
	2	Updating Sequential Access Files,
	3	Concrete Classes,
14	1	Composition Vs. Inheritance
	2	Protected and Private Inheritance,
	3	Polymorphism, Dynamic Binding
15	1	Controlling Access Function and Utility Functions,
	2	Comparision of C and C++
	3	Assignmnet-4/Test/Revision

Lesson Plan

Name of the Faculty Mr. Sumit

Discipline : Computer Science and Engineering

Semester : 5th

Subject : Internet Fundamentals (CSE-204N) and (CSE-216N)

Lesson Plan Duration: 15 weeks (from JAN, 2019 to JUNE, 2019)

** Work (Lecture/Practical) per week (In Hours):Lecture -03 and 03 Lab

Week	Lecture Day	Topic (including assignment/test) (In Each Section)
1	1	Introduction to networks and internet
	2	history, Internet, Intranet & Extranet
	3	Working of Internet, Internet Congestion
2	1	internet culture, business culture on internet
	2	Collaborative computing & the internet
	3	Modes of Connecting to Internet
3	1	Internet Service Providers(ISPs), Internet address, standard address
	2	domain name, DNS, IP.v6.Modems,
	3	Speed and time continuum, communications software; internet tools
4	1	Introduction, Miscellaneous Web Browser details
	2	searching the www: Directories search engines and meta search engines
	3	search fundamentals, search strategies
5	1	working of the search engines, Telnet and FTP
	2	HTTP, Gopher Commands
	3	TCP/IP. Introduction to Browser, Coast-to-coast surfing
6	1	hypertext markup language, Web page installation
	2	Web page setup
	3	Basics of HTML & formatting and hyperlink creation
7	1	Using FrontPage Express, Plug-ins.
	2	Introduction, advantages and disadvantages
	3	User Ids, Pass words, e-mail addresses
8	1	message components, message composition
	2	mailer features, E-mail inner workings
	3	E-mail management, MIME types
9	1	Newsgroups, mailing lists
	2	chat rooms, secure-mails
	3	SMTP, PICO
10	1	Pine, Library cards catalog
	2	online ref. works
	3	Languages: Basic and advanced HTML
11	1	Basics of scripting languages – XML
	2	DHTML, Java Script
	3	Introduction to Web Servers
12	1	PWS, IIS
	2	Apache; Microsoft Personal Web Server
	3	Accessing & using these servers
13	1	Privacy and security topics: Introduction
	2	Software Complexity, Attacks
	3	security and privacy levels
14	1	security policy
	2	accessibility and risk analysis

	3	Encryption schemes
15	1	Secure Web document
	2	Digital Signatures
	3	Firewalls, Intrusion detection systems