Lesson Plan

Name of the faculty:	Er. Savita Khurana
Discipline:	IT
Semester:	5th
Subject Code :	IT-301N & IT-315 N
Subject:	Linux Operating System & Linux Lab
Lesson Plan Duration:	15 Weeks (from July,2019 to Dec., 2019)
Work Load :	Lecture-04 Practical-02

Week	Theory			Practical (IT-315 N)	
	Lecture Day		Topic	Lecture Day	Topic
1		1	Basic introduction of Linux OS, Startup: User accounts, accessing Linux - Logging in and Logging out.	1	Install LINUX on the system dual boot with the Window Operating System
		2	System Installation, configuration and upgradation stages.		
		3	Unix file system: Linux/Unix files, i-nodes and structure.		
		4	File system related commands.		
2		5	Shell as command processor.	2	Create, remove and resize various types of partitions through GUI as well as command line.
		6	Shell variables, creating command substitution.		
		7	Vi editor, compiler options.		
		8	Regular Expressions: syntax, character classes, quantifiers.		
3		9	Unix commands like zip, unzip, pack, unpack, compress, uncompress and Filters.	3	To Study Linux and its basic Commands.
		10	Regular Expressions and Filters: Introducing regular expressions patterns.		
		11	Network installation.		
		12	Boot loaders: Grub and LILO.		
4		13	Kernel: kernel configuration, compilation and managing modules at run time.	4	As supervisor create and maintain user accounts.
		14	Disk partitioning and post install system customization and upgrade.		
		15	Package installation, removal and upgradation : dpkg and APT.		
		16	Semi automatic system installation.		
5		17	**Assignment of vi editor commands.**	5	Using bash shell develop simple shell programs.
		18	Linux networking: basic concepts, TCP/IP protocol, ARP.		
		19	IP addresses and network mask; subnets and routing.		

	20	Configuring Linux on the network: arp, Ipconfig and netstat commands.		
6	21	Opening and closing ports: Telnet, rsh, ftp, rcp, ssh, rsync, inetd.conf.	6	Develop shell programs using grep and sed commands.
	22	Network file system sharing on the network, RPC services, NFS server and client sides.		
	23	NFS installation & configuration.		
	24	Statistic mount and auto mount configuration.		
7	25	NFS troubleshooting, security and optimization.	7	Shell scripts practice
	26	Network Information Service (NIS) : centralized authentication systems.		
	27	NIS client and server configuration, compatibility mode.		
	28	Security issues related to NIS.		
8	29	Elements of window networking, Net BIOS , SMB CIFS protocols.	8	To configure printers in Linux through GUI as well as command line.
	30	File sharing and printing through Samba server on Linux.		
	31	Samba client installation and configuration.		
	32	Running Windows and Linux on the same PC.		
9	33	Boot loaders: GRUB and NT	9	Creating, Removing of swap space as well as swap files through command line as well as GUI.
	34	Accessing Windows file system from Linux and vice versa.		
	35	**Assignment of servers installation and configuration.**		
	36	Overview of Unix authentication system and naming service .		
10	37	Introduction to LDAP: Domain component, OU, CN, Schemas, idif format, services.	10	Implementing disk quotas- enabling, creating, mounting, configuring, assigning, disabling.
	38	Polls and commands.		
	39	LDAP installation and configuration.		
	40	LDAP applications.		
11	41	Scripts, conditional, logical and case statements.	11	Configuring networks on Linux through GUI and command line.
	42	Shell scripts : functions, customizing environment.		
	43	Shell's awk, grep and sed commands.		
	44	Run levels and startup scripts.		
12	45	Scheduling jobs using at and cron.	12	Installation and configuration of NFS Server.
	46	rc and init files.		
	47	Practice of shell scripting.		
	48	System Vulnerabilities, port scanning.		
13	49	Encrypted services and connections.	13	Installation and configuration of NFS Server.
	50	PGP/GPG Intrusion protection.		

	51	TCP wrappers, IP-firewalls, NAT and DMZ.		
	52	Intrusion detection systems and tripwire.		
14	53	Secure system management practices.	14	Configuring firewalls and managing various services of Linux.
	54	**Assignment of Linux network security approaches.**		
	55	Steps of Email transaction, Email envelopes and headers.		
	56	Introduction to SMTP servers.		
15	57	IMAP and POP3 Servers.	15	INTERNAL VIVA
	58	Email relay, postfix configuration, spam and viruses.		
	59	DNS: Name resolution, Domain name hierarchy.		
	60	DNS master slave configuration and caching DNS with BIND 9.		

Name of the Faculty:	Er. Pooja Sharma
Discipline:	B.Tech (IT)
Semester:	5th
Subject:	Digital Data Communication(IT-303N)
Lesson Plan Duration:	15 weeks(from July, 2019 to Dec, 2019)
Work Load (Lecture) per week (In hours):	Lecture-4

Week	Lecture	Topic
1	1.	What is communication
	2.	Elements of communication system
	3.	Signal , Concept of bandwidth
	4.	sources of signal
2	5.	Types of communication channels
	6.	classification of electronic communication system
	7.	Modulation
	8.	Introduction to analog modulation system
3	9.	AM
	10.	FM
	11.	PM
	12.	Elements of Digital communication system
4	13.	Comparison of analog and digital modulation
	14.	advantages and disadvantages of digital communication
	15.	Limitations of communication system
	16.	Electromagnetic spectrum for communication
5	17.	Assignment-1
	18.	**Pulse Modulation**
	19.	Sampling theorem,
	20.	Nyquist rate,
6	21.	Introduction to PAM
	22.	PWM
	23.	PPM
	24.	Quantization
7	25.	Introduction to PCM
	26.	delta modulation
	27.	Introduction to TDM
	28.	FDM
8	29.	Assignment-2
	30.	**Digital Modulation**
	31.	Line coding

		32.	introduction to Encoding schemes
9		33.	RZ
		34.	NRZ
		35.	Modulation Techniques
		36.	---do---
1		37.	ASK
		38.	FSK
		39.	PSK
		40.	QPSK
		41.	**Digital data Transmission**
1		42.	---do---
		43.	Classification: Parallel, Serial
		44.	synchronous transmission
1		45.	Asynchronous transmission
		46.	---do---
		47.	Error Detection and correction techniques
		48.	---do---
1		49.	Parity checks
		50.	Hamming code
		51.	---do---
		52.	Assignment-3
1		53.	DTE
		54.	DCE interface
		55.	Introduction to RS-232C
		56.	---do---
1		57.	RS-449
		58.	---do---
		59.	USB
		60.	usb

Lesson Plan

Name of the Faculty:	Er.Deepti Chauhan
Discipline:	B.Tech (IT)
Semester:	5th
Subject:	Java Programming (IT-305N) & Java Programming Lab (IT-315N)
Lesson Plan Duration:	15 weeks (from July, 2019 to Dec, 2019)
Work Load (Lecture/Practical) per week (In hours):	Lecture-4, Practical-3

Week	Lecture Day	Theory	Practical	
		Topic (Including Assignment/Test)	Practical Day	Topic
1	1	Introduction to Java & Principles of Object Oriented Programming: Basic Concepts of OOP and it's Benefits	1	Write a program to illustrate the concept of simple and multilevel inheritance
	2	Application of OOP. The Creation of Java, Importance of Java for the Internet, Java's Magic: The Byte-code		
	3	Features of Java. Object-Oriented Programming in Java, Java Program Structure		
	4	Defining Classes: Defining of a Class Definition of Methods, Constructors, Creating Objects of a Class,		
2	5	Assigning Object Reference Variables, The keyword "this" , Defining and Using a Class, Automatic Garbage Collection	2	Write a program to illustrate the concept of "this" keyword
	6	Arrays and Strings: Arrays, Arrays of Characters		
	7	String handling Using String Class,Operations on String Handling Using		
	8	Extending Class and Inheritance: Using Existing Classes, Class Inheritance		
3	9	Choosing Base Class, Access Attributes	3	Write a program to illustrate the concept of Constructor and
	10	Polymorphism, Multiple Levels of Inheritance		

	11	Abstraction through Abstract Classes, Using Final Modifier		method Overloading
	12	Programming examples of inheritance		
4	13	Assignment 1	4	Write a program to draw a Pyramid in JAVA
	14	The Universal Super class-Object Class		
	15	Package & Interfaces: Understanding Packages, Defining a Package		
	16	Adding Classes from a Package to your Program,		
5	17	Understanding CLASSPATH, Standard Packages	5	Write a program to implement Binary Search
	18	Access Protection in Packages, Concept of Interface. Exception		
	19	Assignment 2		
	20	Exception Handling: The Idea behind Exceptions		

Name of the Faculty	Ms. Rakhi Sharma
Discipline	B.Tech-IT
Semester	5th
Subject	Multimedia & Virtual Reality (IT-307 N)
Lesson Plan Duration	15 weeks(from July, 2019 to November, 2019)
Workload	Lecture-4

Week	Lecture	Topic
1.	1.	**Basics of Multimedia Technology:** Computers, communication and entertainment
	2.	Multimedia an introduction & emerging applications, framework for multimedia systems, multimedia devices, CD-AUDIO, CD_ROM, multimedia presentation tools.
	3.	**Audio, Video And Image:** Digital representation of sound,
	4.	transmission of digital sound
2.	5.	MPEG-Audio ,audio compression and decompression
	6.	Brief survey of speech recognition and generation,
	7.	musical instrument digital interface
	8.	evaluating a compression system-
3.	9.	redundancy and visibility ,
	10.	video compression techniques,
	11.	JPEG-image compression standards,
	12.	MPEG-motion video compression
4.	13.	standard-DVI Technology
	14.	**Multimedia File Systems and Information Models**
	15.	The case of multimedia information system
	16.	file support for continuous media-data models for multimedia and hyper media information
5.	17.	Multimedia presentation and authoring,
	18.	current state of industry-design paradigms and user interface-barriers to widespread use,
	19.	multimedia system service architecture,
	20.	media stream protocol and services and
6.	21.	window system,.
	22.	client control of continuous media,
	23.	file system support,
	24.	hyper applications
7.	25.	Multimedia services over the public network,
	26.	Assignment/Test
	27.	requirements, architecture and protocols-applications-
	28.	network services-network protocols-multimedia interchange
8.	29.	Quicktime movie file format(QMF)-
	30.	MHEG(Multimedia and Hypermedia information and coding expert group)-format function and representation
	31.	summary-real time interchange-

	32.	Multimedia conferencing: teleconferencing systems.	
9.	33.	**Animation:** Introduction, Basic terminology	
	34.	Techniques, Motion graphics 2D & 3D animation.	
	35.	Introduction to MAYA (Animating tool):	
	36.	Fundamentals, Modeling:	
10.	37.	NURBS, Polygon, Organic, animation,	
	38.	paths & boxes, deformers,	
	39.	working with MEL: Basics & programming Rendering &	
	40.	special effects: shading &	
11.	41.	Texturing surfaces lighting, special effects.	
	42.	**Virtual Reality:** Introduction to Virtual Reality	
	43.	Four key elements of virtual reality	
	44.	a) virtual world, b) immersion, c) sensory feedback d) interactivity	
12.	45.	Desktop virtual reality	
	46.	VR operating system	
	47.	Virtual environment displays	
	48.	Virtual orientation making	
13.	49.	Visually coupled system requirements	
	50.	Intelligent VR software systems.	
	51.	Assignment	
	52.	Test	
14.	53.	Assignment	
	54.	Test	
	55.	Assignment	
	56.	Test	
15.	57.	Assignment	
	58.	Test	
	59.	Assignment	
	60.	Test	

Lesson Plan

Name of the Faculty:	Er. Vipul Gupta
Discipline:	B.Tech (IT)
Semester:	5th
Subject:	Computer Graphics (IT-309N) & Computer Graphics Lab (IT-311N)
Lesson Plan Duration:	15 weeks (from July, 2019 to Dec, 2019)
Work Load (Lecture/Practical) per week (In hours):	Lecture-4, Practical-3

Week	Lecture Day	Theory	Practical	
		Topic (Including Assignment/Test)	**Practical Day**	**Topic**
1	1	What is Computer Graphics.	1	To study the inbuilt graphics function of C.
	2	Computer Graphics Applications		
	3	Two dimensional Graphics Primitives:		
	4	Points and Lines		
2	5	Point Plotting Techniques: Coordinate system	2	Write a program to implement Slope Intercept line drawing algorithm.
	6	Incremental Method		
	7	Line drawing algorithms		
	8	DDA		
3	9	Bresenhams'	3	Write a program to implement DDA line drawing algorithm.
	10	Circle generating algorithms		
	11	Using polar coordinates		
	12	Mid point circle drawing algorithms		
4	13	Filled area algorithms	4	Write a program to implement Bresenham's line drawing algorithm.
	14	Scan line polygon filling algorithms		
	15	Boundary filled algorithms		
	16	Graphic devices: Light pen		
5	17	Mouse, Tablet, Touch panel	5	Implement the Bresenham's circle drawing algorithm.
	18	Digitizers		
	19	Two dimensional geometric transformation		
	20	Viewing pipeline, window to viewport transformation		
6	21	Window to view port mapping.	6	Write a program to implement the midpoint circle drawing algorithm.
	22	**Clipping**: Point & Line clipping algorithm		
	23	Cohen-Sutherland Line clipping algorithms		
	24	Polygon clipping: Sutherland-Hodgeman Polygon clipping algorithm		

7	25	Curve clipping, Text clipping	7	Write a program to implement 2-D transformations.
	26	Three Dimensional Viewing		
	27	Introduction to Three-dimensional display methods		
	28	Parallel & Perspective Projection		
8	29	depth cueing	8	Write a program to show a ball moving on the screen according to the given requirements
	30	surface rendering		
	31	Three-Dimensional Geometric and Modeling Transformations		
	32	Viewing pipeline		
9	33	Viewing coordinates	9	Write a program to implement the midpoint circle drawing algorithm.
	34	Representation of 3-D Curves and Surfaces		
	35	Curved lines and surfaces		
	36	Assignment/Test		
10	37	spline representations	10	Write a program to implement the Beizer curve.
	38	interpolation and approximation splines		
	39	Parametric continuity conditions		
	40	Geometric continuity conditions		
11	41	Bezier curves and surfaces:	11	Implement the line clipping algorithm using C.
	42	Bezier curves		
	43	properties of Bezier curves		
	44	Bezier surfaces		
12	45	B-spline curves and surface	12	Implement the Liang Barsky Line Clipping Algorithm.
	46	Hidden Surfaces removal		
	47	Classification of Visible-Surface Detection algorithms		
	48	Hidden surface elimination		
13	49	depth buffer algorithm	13	---do-----
	50	scan line coherence		
	51	Assignment/Test		
	52	area coherence algorithm		
14	53	priority algorithm	14	Implement boundary fill algorithm using C.
	54	Introduction to animation		
	55	Design of Animation Sequences		
	56	General Computer-Animation Functions		
15	57	Morphing	15	Implement the depth buffer algorithm using C.
	58	Assignment/Test		
	59	Assignment/Test		
	60	Assignment/Test		

Name of the Faculty:	Ms. Rakhi Sharma
Discipline:	B.Tech (IT)
Semester:	5th
Subject:	Multimedia Lab(IT-313N)
Lesson Plan Duration:	from July, 2019 to Dec, 2019
Work Load (practical) per week (In hours):	Practical:2

Practical Day	Topic
1.	Create slides using power point
2.	Create a website of your favourite topic
3.	Create a website of your favourite topic
4.	Create a website of your college using HTML code
5.	Create a website of your college using HTML code
6.	Perform the following using movie star: a) Video capturing b) Video editing c) Creating video CD
7.	Animate a ball using flash
8.	Using Adobe deluxe photo shop edit a digital photo by changing the background color, changing the theme.
9.	Using Adobe deluxe photo shop edit a digital photo changing he part of the photo and editing the different parts of the photo
10.	Animate the following using GIF animator: Image
11.	Animate the following using GIF animator: Text Banner
12.	Perform the following using multimedia software: Clip a portion of audio wave file
13.	Add another audio file to the existing clipped file
14.	Perform the following using multimedia software: a) Extract audio from video file
15.	b) Change the format of above audio file