

## Lesson Plan

**Name of the Faculty** : Garima Rohela

**Discipline** : Computer Engineering

**Semester** : IIIrd

**Subject** : Operating System

**Lesson Plan Duration** : 15 weeks (From July, 2018 to Nov,2018)

**Work Load (Lecture /Practical) per week (in hours): Lectures – 04, Practical – 06)**

**Note: G1 and G2 are the respective Groups of students**

Week	Theory		Practical	
	Lecture Day	Topic (Including Assignment/ Test)	Practical Day	Topic
1 <sup>st</sup>	1 <sup>st</sup>	Overview of Operating Systems	G-1	Demonstration of all the controls provided in windows control panel.
	2 <sup>nd</sup>	Definition of Operating Systems,		
	3 <sup>rd</sup>	Types of Operating Systems	G-2	Demonstration of all the controls provided in windows control panel.
	4 <sup>th</sup>	Operating System Services		
2 <sup>nd</sup>	1 <sup>st</sup>	User operating system interface	G-1	Exercise on Basics of windows.
	2 <sup>nd</sup>	System Calls	G-2	Exercise on Basics of windows.
	3 <sup>rd</sup>	Types of System Calls		
	4 <sup>th</sup>	System Programs		
3 <sup>rd</sup>	1 <sup>st</sup>	Operating System Structure	G-1	Exercise on Basics of windows.
	2 <sup>nd</sup>	Virtual Machine	G-2	Exercise on Basics of windows.
	3 <sup>rd</sup>	Benefits of Virtual Machine		
	4 <sup>th</sup>	Revision		
4 <sup>th</sup>	1 <sup>st</sup>	Process Management (Principles and Brief Concept	G-1	Practice
	2 <sup>nd</sup>	Process concept, Process State, Process Control Block		
	3 <sup>rd</sup>	Scheduling Queues, Scheduler, Job Scheduler, Process Scheduler	G-2	Practice
	4 <sup>th</sup>	Context Switch, Operations on Process, Interprocess Communication		
5 <sup>th</sup>	1 <sup>st</sup>	Shared Memory Systems,	G-1	Installation of Linux Operating System
	2 <sup>nd</sup>	Message-Passing Systems, CPU Scheduler, Scheduling Criteria, Scheduling Algorithms		
	3 <sup>rd</sup>	Preemptive and Non Preemptive, First come first serve (FCFS),	G-2	Installation of Linux Operating System
	4 <sup>th</sup>	Shortest Job first (SJF), Round Robin (RR)		

6 <sup>th</sup>	1 <sup>st</sup>	Multiprocessor scheduling	G-1	Usage of directory management commands of Linux: ls, cd, pwd, mkdir, rmdir
	2 <sup>nd</sup>	Process Synchronization		
	3 <sup>rd</sup>	<b>Revision</b>	G-2	Usage of directory management commands of Linux: ls, cd, pwd, mkdir, rmdir
	4 <sup>th</sup>	<b>Test</b>		
7 <sup>th</sup>	1 <sup>st</sup>	Deadlocks (Principles and Brief Concept)	G-1	Usage of File Management commands of Linux: cat, chmod,cp, mv, rm, pg, more, find
	2 <sup>nd</sup>	Conditions for Dead lock		
	3 <sup>rd</sup>	Methods for handling deadlocks	G-2	Usage of File Management commands of Linux: cat, chmod,cp, mv, rm, pg, more, find
	4 <sup>th</sup>	Methods for handling deadlocks		
8 <sup>th</sup>	1 <sup>st</sup>	Dead Lock Prevention, Deadlock Avoidance	G-1	Usage of File Management commands of Linux: cat
	2 <sup>nd</sup>	Deadlock detection, Recovery from deadlock.		
	3 <sup>rd</sup>	Memory Management Function (Principles and Brief Concept)	G-2	Usage of File Management commands of Linux: cat
	4 <sup>th</sup>	Definition – Logical and Physical address Space		
9 <sup>th</sup>	1 <sup>st</sup>	Swapping	G-1	Use the general purpose commands of Linux: wc, od, lp, cal , date, who, whoami
	2 <sup>nd</sup>	Memory allocation		
	3 <sup>rd</sup>	Contiguous Memory allocation,	G-2	Use the general purpose commands of Linux: wc, od, lp, cal , date, who, whoami
	4 <sup>th</sup>	Fixed and variable partition		
10 <sup>th</sup>	1 <sup>st</sup>	Internal and External fragmentation and Compaction	G-1	Using the simple filters: pr, head, tail, cut, paste, nl, sort
	2 <sup>nd</sup>	Paging – Principle of operation, Page allocation		
	3 <sup>rd</sup>	Hardware support for paging	G-2	Using the simple filters: pr, head, tail, cut, paste, nl, sort
	4 <sup>th</sup>	Protection and sharing		
11 <sup>st</sup>	1 <sup>st</sup>	Disadvantages of paging, Segmentation, Virtual Memory.	G-1	Using the simple filters: pr, head, tail, cut, paste, nl, sort
	2 <sup>nd</sup>	<b>Revision &amp; Test</b>		
	3 <sup>rd</sup>	I/O Management Functions (Principles and Brief Concept - Dedicated Devices	G-2	Using the simple filters: pr, head, tail, cut, paste, nl, sort
	4 <sup>th</sup>	Shared Devices, I/O Devices, Storage		

		Devices		
12 <sup>th</sup>	1 <sup>st</sup>	Buffering, Spooling.	G-1	Viva
	2 <sup>nd</sup>	File Management (Principles and Brief Concept)		
	3 <sup>rd</sup>	Types of File System; Simple file system, Basic file system, Logical file system	G-2	Viva
	4 <sup>th</sup>	Various Methods of Allocating Disk Space		
13 <sup>th</sup>	1 <sup>st</sup>	Linux Operating System - History of Linux and Unix, Linux Overview	G-1	Communication Commands: news, write, talk, mseg, mail, wall
	2 <sup>nd</sup>	Structure of Linux		
	3 <sup>rd</sup>	Linux releases, Open Linux, Linux System Requirements	G-2	Communication Commands: news, write, talk, mseg, mail, wall
		Linux Commands and Filters: mkdir, cd,rmdir,pwd, ls, who, whoami, date, cat,chmod, cp, mv, rm,pg,more, pr		
14 <sup>th</sup>	1 <sup>st</sup>	Linux Commands and Filters: tail, head, cut, paste, nl, grep, wc, sort, kill, write, talk	G-1	Write a shell program that finds the factorial of a number.
	2 <sup>nd</sup>	Linux Commands and Filters: mseg,wall, merge,mail		
	3 <sup>rd</sup>	news Shell: concepts of command options, input, output,redirection	G-2	Write a shell program that finds the factorial of a number.
15 <sup>th</sup>	1 <sup>st</sup>	Pipes, redirecting and piping with standard errors	G-1	Write a shell program that finds whether a given number is prime or not.
	2 <sup>nd</sup>	Shell scripts, vi editing commands		
	3 <sup>rd</sup>	REvision	G-2	Write a shell program that finds whether a given number is prime or not.
		Test		

## Lesson Plan

**Name of the Faculty : GARIMA ROHELA**

**Discipline : Computer Engineering**

**Semester : Vth Semester**

**Subject : ENVIROMENTAL EDUCATION**

**Lesson Plan Duration : 15 weeks (From July, 2018 to Nov,2018)**

**Work Load (Lecture)per week (in hours): Lectures – 03)**

Wee k	Theory	
	Lecture Day	Topic (Including Assignment/ Test)
1 <sup>st</sup>	1 <sup>st</sup>	Definition of Environmental Education
	2 <sup>nd</sup>	Scope and Importance of Environmental Education
	3 <sup>rd</sup>	REVISION
2 <sup>nd</sup>	1 <sup>st</sup>	Basics of Ecology
	2 <sup>nd</sup>	Biodiversity
	3 <sup>rd</sup>	Eco system and sustainable development
3 <sup>rd</sup>	1 <sup>st</sup>	Sources of pollution - natural and manmade
	2 <sup>nd</sup>	Causes of pollution - natural and manmade
	3 <sup>rd</sup>	Effects of pollution - natural and manmade
4 <sup>th</sup>	1 <sup>st</sup>	Control measures of pollution (air) and their units of measurement
	2 <sup>nd</sup>	Control measures of pollution (water) and their units of measurement
	3 <sup>rd</sup>	Control measures of pollution (noise) and their units of measurement
5 <sup>th</sup>	1 <sup>st</sup>	Control measures of pollution (soil) and their units of measurement
	2 <sup>nd</sup>	Control measures of pollution (radioactive) and their units of measurement
	3 <sup>rd</sup>	Control measures of pollution (nuclear) and their units of measurement
6 <sup>th</sup>	1 <sup>st</sup>	REVISION and ASSIGNMENT

	2 <sup>nd</sup>	Test of Complete Unit
	3 <sup>rd</sup>	Solid waste management – Causes
7 <sup>th</sup>	1 <sup>st</sup>	Solid waste management – effects
	2 <sup>nd</sup>	Control measures of urban waste
	3 <sup>rd</sup>	Control measures of industrial waste
8 <sup>th</sup>	1 <sup>st</sup>	REVISION and TEST
	2 <sup>nd</sup>	Define Mining and deforestation
	3 <sup>rd</sup>	Causes of Mining and deforestation
9 <sup>th</sup>	1 <sup>st</sup>	Effects and control measures of Mining and deforestation
	2 <sup>nd</sup>	REVISION and TEST
	3 <sup>rd</sup>	Environmental Legislation - Ways of preventing the Water pollution
10 <sup>th</sup>	1 <sup>st</sup>	Control of water pollution
	2 <sup>nd</sup>	Water (prevention and control of pollution) Act 1974
	3 <sup>rd</sup>	Air(Prevention and Control of Pollution)
11 <sup>th</sup>	1 <sup>st</sup>	Air(Prevention and Control of Pollution) Act 1981
	2 <sup>nd</sup>	Environmental Protection Act 1986
	3 <sup>rd</sup>	Role and Function of State Pollution Control Board
12 <sup>th</sup>	1 <sup>st</sup>	Environmental Impact Assessment (EIA)
	2 <sup>nd</sup>	REVISION and ASSIGNMENT
	3 <sup>rd</sup>	TEST
13 <sup>th</sup>	1 <sup>st</sup>	Role of Non-conventional Energy Resources (Solar Energy)
	2 <sup>nd</sup>	Role of Non-conventional Energy Resources (Wind Energy)
	3 <sup>rd</sup>	Role of Non-conventional Energy Resources( Bio Energy)
14 <sup>th</sup>	1 <sup>st</sup>	Role of Non-conventional Energy Resources (Hydro Energy)

	<b>2<sup>nd</sup></b>	Discussion of Current Issues in Environmental Pollution
	<b>3<sup>rd</sup></b>	Global Warming and Green House Effect
<b>15<sup>th</sup></b>	<b>1<sup>st</sup></b>	Depletion of Ozone Layer, Recycling of Material
	<b>2<sup>nd</sup></b>	Environmental Ethics, Rain Water Harvesting Maintenance of Groundwater, Acid Rain, Carbon Credits ,Assignment given
	<b>3<sup>rd</sup></b>	REVISION and TEST