

PADMASHREE KRUTARTHA ACHARYA INSTITUTE OF
ENGINEERING & TECHNOLOGY, BARGARH



LESSON PLAN
Session-2023-2024

Discipline: comp. Sc. and engg. Engg. Semester: 5th

Subject: Computer Hardware and Maintenance (CHM)

Name of the Teaching Faculty: Sunita Mahapatra

Subject: CHM No. of Days/per week class allotted 04

Semester From Date: 01.08.2023 To Date: 30.11.2023 No. of Weeks: 15

Week	Class Day	Theory /Practical Topics
<u>1st</u>	1	Introduction
	2	Need of management in computer center
	3	Types of jobs carried out in computers in an organization
	4	Duties and responsibilities of personal involved
<u>2nd</u>	1	Need of training of staff
	2	computer makers and vendors
	3	Site preparation and installation introduction
	4	plan for computer room layout based on size and layout factors
<u>3rd</u>	1	Factors required for installation of computer system
	2	Need of power conditioning equipments
	3	Uninterruptible power supply
	4	Interpretation of the installation and wiring diagram

Sunita Mahapatra
Signature of the Faculty

Subject: CHM No. of Days/per week class allotted 04

Semester From Date: 01.08.2023 To Date: 30.11.2023 No. of Weeks: 15

Week	Class Day	Theory /Practical Topics
<u>4th</u>	1	Tools required for installation
	2	Steps for actual installation
	3	power conditioning equipments like CVT, UPS
	4	isolation circuits with principle of functioning
<u>5th</u>	1	introduction to motherboard and components
	2	components and slots
	3	processor socket / slots - memory sockets
	4	chip sets, cache
<u>6th</u>	1	BIOS
	2	clock Generator, RTC
	3	I/O controller, power connector, keyboard connector, mouse connector
	4	Motherboard architecture and Block diagram

Sumita Mahapatra
Signature of the Faculty

Subject: CHM+ No. of Days/per week class allotted 04

Semester From Date: 01.08.2023 To Date: 30.11.2023 No. of Weeks: 15

Week	Class Day	Theory / Practical Topics
<u>7th</u>	1	Processors (Core 2 duo processor, quad core)
	2	Core i3, i5, i7 series, AMD A10 series
	3	Xeon processor, chip sets, PCI, AGP, USB
	4	: color codes for devices/ports
<u>8th</u>	1	Introduction to memory & I/O devices
	2	primary memory
	3	secondary memory, memory speed, Access time
	4	Hard disk, construction, working principles
<u>9th</u>	1	: File system
	2	Formatting and partitioning of Hard disk
	3	Removable storage & special devices and their working principle
	4	CD, DVD, External drives, memory stick, USB flash drive SSD

Sunita Mahapatra
Signature of the Faculty

Subject: CHM No. of Days/per week class allotted 04

Semester From Date: 01.08.2023 To Date: 30.11.2023 No. of Weeks: 15

Week	Class Day	Theory /Practical Topics
<u>10th</u>	1	Keyboard description (interfacing, USB, wireless)
	2	Types of keys, keyboard matrix, key bouncing, mouse interfacing
	3	Printers (Types, operation & Trouble shooting)
	4	Scanners (Types, operation & Trouble shooting)
<u>11th</u>	1	Introduction to display, power supply & BIOS
	2	Displays and Graphics cards, LCD, LED, PLASMA, TFT Displays
	3	SMPS description, working principle
	4	BIOS (Functions, setups, types)
<u>12th</u>	1	POST (operation, faults related to H/w)
	2	Introduction to maintenance & troubleshooting of computer
	3	Assembly of components of desktop computers
	4	Configuring Laptops and power settings

Sunita Mahapatra
Signature of the Faculty

Subject: CHM No. of Days/per week class allotted 04
 Semester From Date: 01.08.2023 To Date: 30.11.2023 No. of Weeks: 15

Week	Class Day	Theory / Practical Topics
<u>13th</u>	1	Laptop components (Adapter, Battery, basic components, CPU types, RAM types)
	2	Laptop motherboard, block diagram, keyboard
	3	Formatting, partitioning and installation of OS
	4	Troubleshooting of commonly faced problems in laptops and desktops
<u>14th</u>	1	Basic maintenance concepts, diagnostic programs
	2	Methods of trouble shooting, upgradation of S/W
	3	Virus concept, Anti virus
	4	Introduction to networking devices and their interfaces
<u>15th</u>	1	Network interface card
	2	Networking devices such as hub, switch, Router
	3	Types of network cable (twisted pair, co-axial etc.)
	4	Types of network connector

Swita Mahapatra
 Signature of the Faculty