GovernmentPGCollege,AmbalaCantt

Course File(Session 2023-24)

Name ofProfessor: Ms. Shalin Bhola

Class:B.A. Pol. Sc./Ist Semester

Subjectcode:**B23-CSE-104 (Common with B23-CAC-104)**

Subject Name:**Fundamentals of Computer Science**

Credits	Theory	Practical	Total
	1	1	2
ContactHours	1	2	3

Max.Marks:50(30(T)+20(P)) **Time:3Hrs.(T),3Hrs.(P)**

InternalAssessmentMarks:15(10(T)+5(P))
EndTermExamMarks:35(20(T)+15(P))

Part B-Contents of theCourse

Unit	Topics	Contact Hours
I	Introduction to Computers: Definition of Computers, HistoryandGenerationsofComputers,Characteristicsofcomputer, ClassificationofComputers.FundamentalBlockdiagramofCompu ter:CPU,Input & Output Unit.	4
II	Software: Definition of Software, Types of Software- Systemsoftware, Application software and Utility software. Types ofComputer Languages, Assemblers, Interpreters, Compiler.	4
III	Introduction to Operating Systems: Types of Operating System,FunctionsofOperatingSystem. Windows: Introduction to Windows, Starting Windows, DeskTop,TaskBar,Openingandclosingapplications,icons- creating,renamingandremoving.DateandTimesetting,Workingwi thfilesandfolders- creating,deleting,opening,finding,copying,moving, and renaming.	4
IV	Networking:Concept,BasicElementsofaCommunicationSystem, Data Transmission Media, LAN, MAN, WAN.IntroductionofInternetandWWW,BasicworkingofaWebB rowser, Introductionto popularweb browsers.	4

| V* | Practicum:

Students are advised to do laboratory/practical practice notlimitedto, butincludingthefollowingtypes ofproblems:
• Dismantling the system unit, recognize all majorcomponentsinsideaPC,describefunctionofea chcomponent and define the relationship of internalcomponents
• Explore and describe some system utility like reg edit, memory portioning, control panel, window tools.
• Understandingcontrolpanel
• DateandTimesetting.
• Working with files and folders-creating, deleting,opening, finding,copying,moving,andrenaming. | 25 |

SuggestedEvaluationMethods

| **InternalAssessment:**
➢ **Theory**
• ClassParticipation:4
• Seminar/presentation/assignment/quiz/classtestetc.:NA
• Mid-TermExam:6

➢ **Practicum**
• ClassParticipation:NA
• Seminar/Demonstration/Viva-voce/Labrecordsetc.:5
• Mid-TermExam: NA | **End TermExamin ation:**

A three hour examfor both theory andpracticum. |

PartC-LearningResources

Text/ReferenceBooks:
• Fundamentals of Computers, V. Rajaraman 6th edition PHI Learning Private Limited2014
• PeterNorton:ComputingFundamentals.6thEdition,McGraw Hill-Osborne,2007
• AlexisLeonandMarthewsLeon: Introductionto Computers, Leon Vikas,1999.
• InternetBasics.E.DouglasCommerPHI.

COURSEOBJECTIVES

Thecourseobjectivesoutlined areas follows:

- **Identifying typical computer and digital device components**, including processors, keyboards, monitors, speakers, power buttons, etc.

- **Understanding the function of basic digital components**, such as identifying and using a mouse, powering on external monitors, understanding inputs and outputs of different devices and more.

- **Associating hardware with digital devices**, such as being able to connect and use a printer, bluetooth, speakers, an external monitor and internet modems.

- **Navigating digital devices**, such as being able to select and use software or applications, using multiple windows or tabs and identifying and finding files.

- **Understanding cloud computing** and its uses.

- **Utilizing digital storage**, including identifying a variety of media storage devices as well as understanding basic use cases.

- **Troubleshooting basic digital issues**, including common hardware and software issues.

- **Understanding online safety and responsibility** including protecting privacy online and using information responsibly.

COURSE OUTCOME

Afterthesuccessfulcompletion ofthecourse, studentswillbeable:

- Effectively using computer applications and hardware.

- Identifying and using a variety of media storage and understanding use cases.

- Developing an understanding of operating systems and graphic user interfaces.

- Identifying successful troubleshooting strategies for common hardware and software issues.

- Understanding transferrable functions between different types of software.

- Differentiating between software types and common use cases.

- Applying computer fundamentals knowledge to other technology, including mobile devices.

- Understanding network technology and applying knowledge in cross-platform connectivity uses.

- Tointroducetothestudents,thebasicunderstandingofthe workingofacomputersystem.

- Tofamiliarizethestudentswiththeconceptofalgorithmsand flowchart.

- Tofamiliarizethestudentswiththevarioustypesofsoftware.

- Tomakethestudentsfamiliarwiththebasicinternettechnologyand concepts.

Lesson Plan

Week No	ScheduledDates	Topics to be covered
1	**July 28,2023-** July29,2023	Computer Fundamentals: Evolution of Computers through generations
2	**August 4,2023-** Aug 05,2023	Characteristics of Computers, Strength and Limitations of Computers
3	**Aug11,2023-** Aug 12,2023	Classification of Computers, Fundamental Components of Computer System,
4	**Aug18,2023-** Aug 19,2023	Application of computers in various fields, Types of Software, System Software, Application Software, Utility Software
5	**Aug25,2023-** Aug 26,2023	Memory System: Concept of bit, byte, word, nibble, storage locations and addresses, measuring units of storage capacity, access time,
6	**Sept 1,2023-** Sept 2,2023	Concept of memory hierarchy, Primary Memory-RAM, ROM, PROM, EPROM,
7	**Sept 08,2023-** Sept 09,2023	Revision and Practice;
8	**Sept15,2023-** Sept16,2023	Secondary Memory- Types of Storage Devices, Magnetic Tape, Hard Disk, Optical Disk, Flash Memory
9	**Sept 22,2023-** Sept 23,2023	I/O Devices, Input – Output parts of Desktop Computers, Device
10	**Sept29,2023-** Sept30,2023	Controller, Device Driver, Input Devices- Classification and Use
11	**Oct06,2023-** Oct07,2023	keyboard, pointing Devices- Mouse, Touchpad, Track Ball, Joystick, Magnetic Strips, Scanner,
12	**Oct13,2023-** Oct14,2023	Digital camera, Micro phone, Output Devices- speaker,
13	**Oct20,2023-** Oct21,2023	Monitor, Printers, Classification , laser, inkjet, dot matrix, Plotters

14	**Oct27,2023-** Oct28,2023	Revision and Practice;
15	**Nov 3, 2023-** Nov04,2023	Introduction to Operating System- Definitions, function,
16	**Nov 17,2023-** Nov18,2023	Features of OS, Icon, folder, files
17	**Nov24,2023-** Nov25,2023	Start button, task bar, folders, short cuts, recycle bin, desktop, my computer, My documents, window explorer, control panel
18	**Dec 1,2023-** Dec 2,2023	The Internet; introduction to networks and internet, history, internet, Working of the internet, modes of connecting to internet
19	**Dec 08,2023-** Dec 09,2023	Revision and Practice; Electronic mail- introduction , advantages and disadvantages, user ids, password, email addresses, message composition
20	**Dec 15,2023-** Dec 16,2023	Revision and Practice
21	**Jan05,2024-** Jan06,2024	Revision and Practice