

DEPARTMENT OF INFORMATION TECHNOLOGY				<i>Certificate Course</i>				
Sem	Course Type	Course Code	Course Title	Credits	Contact Hours/week	CIA	Ext	Total
	Certificate Course - 1		PC Hardware and Networking	2	2	50	50	100

### Course Objectives

1. To understand basic concepts and structure of computer hardware components.
2. To acquire basic and troubleshooting knowledge in Memory Devices.
3. To identify the various External I/O Interfaces.
4. To know about how to connect a system in LAN and Internet.
5. To acquire knowledge of building a PC.

Unit	Content	Hours
I	<b>PC Components, Features, and System Design:</b> What is a PC? – System Types – System Components – <b>Processor Types and Specifications:</b> Processor Specifications. (List only). <b>Mother Boards and Buses:</b> Mother Board Form Factors – Mother Board Selection Criteria.	6
II	<b>Memory:</b> Memory Basics – Memory Standards – Speed and Performance – RAM Upgrades – Troubleshooting Memory – Memory Defect Isolation Procedures.	6
III	<b>Flash and Removable Storage:</b> USB Flash Drives. <b>External I/O Interfaces:</b> Introduction to Input / Output Ports.	6
IV	<b>Local Area Networking:</b> Defining a Network – Client/Server Versus Peer Networks – Hardware Elements of Your Network – <b>Internet Connectivity:</b> Broadband Internet Access Types – Internet Connection Security.	6
V	<b>Building or Upgrading Systems:</b> System Components – Hardware and Software Resources – System Assembly and Disassembly – System Startup – Installing the OS – Troubleshooting New Installations.	6

### Books for study

1. Upgrading and Repairing PCs by Scott Mueller, 22<sup>nd</sup> Edition, Pearson Education, 2015.

### Chapters:

- Unit I: 2, 3.2, 4.1, 4.18  
Unit II: 6.1, 6.2, 6.3, 6.9, 6.10, 6.11.  
Unit III: 9.4, 13.1  
Unit IV: 16.1, 16.2, 16.4, 15.2, 15.4  
Unit V: 18

**Books for Reference**

1. Comdex Hardware and Networking Course Kit-Vikas Gupta, Dreamtech Press.
2. Essential Computer Hardware Second Edition : The Illustrated Guide to understanding Computer Hardware(Computer Essentials)-Kevin Wilson

**Web Resources**

1. <https://www.programmer-books.com/wp-content/uploads/2018/12/Troubleshooting-and-Maintaining-Your-PC-All-in-One-For-Dummies-3rd-Edition.pdf>
2. <https://www.instructables.com/How-To-Assemble-A-Basic-Desktop-PC/>
3. <https://www.cpu-world.com/info/id/Intel-identification.html>
4. <https://www.techrepublic.com/article/how-to-control-a-remote-computer-using-microsofts-remote-desktop-connection/>

**Pedagogy**

Chalk and talk, Materials, PPT, Assignment, Seminar, Problem solving, Group discussion, Interaction and Demonstration.

**Course Designer(s) Name**

1. Mr. N. Radha Krishnan
2. Mr. M. Ashok Kumar

**Evaluation Pattern**

- Distribution of marks for Internal and External examinations will be 50% each.
- Course teacher will fix the components for the distribution of marks in both internal and external examinations.