

Diploma in Computer Maintenance

Program Outcomes (PO)

PO1: Design and develop applications to analyze and solve all computer science related problems.

PO2: Involve in perennial learning for a continued career development and progress as a computer professional.

PO3: Communicate effectively and present technical information in oral and written reports.

PO4: Apply information technology to a variety of systems including financial, production and manufacturing systems.

PO5: Be acquainted with the contemporary issues, latest trends in technological development and thereby innovate new ideas in the IT sector.

PO6: Describe and analyze current and relevant advances in computer hardware and software.

PO7: Analyze system requirements for a variety of computer applications.

Program Specific Outcomes (PSO)

PSO1: Troubleshoot, configure and operate data communications systems.

PSO2: Use several different operating systems for the development and implementation of programs in business and technical environments.

COURSE NAME: Paper – 1 Computer Organization and Assembling

CLASS - Diploma in Computer Maintenance SEMESTER – I

This course is about the principles of computer design; Functions, Interconnection Structure, Bus Interconnection. To study the basic organization and architecture of digital computers (CPU, memory, I/O, software) and input output organization which includes modes of transmission. It also includes PC assembling.

Program Learning Outcomes:

Knowledge and Understanding:

- Students will learn about Design of basic computer.

- Students will know what are registers, various types of registers and interfacing various registers.
- Students will learn about the architecture of common bus system.
- Students will learn about the different micro-operations used.
- Students will learn about Instruction Cycle, Interrupt Cycle.
- Students will learn about I/O interface, DMA controller, modes of data transfer and various address modes.
- Students will learn how to assemble a PC

COURSE NAME: Paper – 2 PC Maintenance and Troubleshooting – I
CLASS - Diploma in Computer Maintenance SEMESTER – I

Objectives of the Course:

This course helps student step by step through the typical hardware and operating system problems encountered by technicians, teaching troubleshooting techniques to decipher any problem, and giving you the skills you need to solve them. Students will understand basic concept & structure of computer hardware & networking and apply their knowledge about computer peripherals to identify / rectify problems onboard.

Program Learning Outcomes:

(Knowledge and Understanding, Intellectual Skills, practical Skills, Transferable skills).

A. Knowledge and Understanding):

Students will be able to

- Work inside a microcomputer system with supervision.
- A hands-on approach will be used to provide the student with a basic skill level to work on a computer with the lid off.
- Recognition and solution of common hardware-software problems including the
- replacement or upgrading of components will be addressed

B. Intellectual(Cognitive/ Analytical) Skills:

- Students will be enabled them to identify and rectify the onboard computer hardware, software and network related problems.
- Student will be able to understand the hardware specifications that are required to run operating system and various shipboard application programs.

C. Practical Skills

Students will be able to

- upgrading of existing hardware / software as and when required
- Integrate the PCs into Local Area Network & re-install operating systems and various shipboard applications.
- perform routine maintenance, upgrades
- manage data backup & restore operations on server and update anti-virus software and set schedules

D. Transferable Skills :

- The main aspect of this program is to eliminate cost for the computer engineer boarding the vessel for troubleshoot, install / configure the application program and network related problems and there by charging exorbitant fees to ship owners / managers.

COURSE NAME: Paper – 1 Network Operating Systems

CLASS - Diploma in Computer Maintenance SEMESTER – II

Objectives of the Course:

- Understand different types of networks, various topologies and application of networks.
- Understand types of addresses, data communication.
- Understand the concept of networking models, protocols, functionality of each layer.
- Learn basic networking hardware and tools

(Knowledge and Understanding, Intellectual Skills, practical Skills, Transferable skills).

Learning Outcomes:

A. Practical Skills

Students will learn to:

- Designing of homogenous and heterogenous lab.
- Creating Windows 95/NT/Novell Netware Server.
- How to share information One PC or clients to other clients or PC

COURSE NAME: Paper – 2 PC Maintenance and Troubleshooting – II

CLASS - Diploma in Computer Maintenance SEMESTER – II

Objectives of the Course:

This course aims at gaining knowledge about Hardware and maintenance, its aims, aspects and relations to other fields. It also aims at acquainting students with the implementation of hardware and its characteristics, components and functions.

Learning Outcomes:

A. Knowledge and Understanding):

Students will

- know how to define the implementation of hardware.
- understand and explain the basic concepts associated with the different branches of hardware (motherboard, printer , memory etc) and
- Students will understand and be able to describe the differences between the various parts used in motherboard.

B. Intellectual(Cognitive/ Analytical) Skills:

Students will be able to

- identify the properties
- analyze the system capability
- analyze hardware requirements
- analyze how to do implementation , troubleshoot the device .
- think critically about the Maintenance , which is very important.

C. Practical Skills

Students will learn to:

- knowledge of motherboard
- implementation of motherboard
- Expansion slots system in motherboard
- Bus system
- Memory etc

D. Transferable Skills :

Students will be able to

- implementation at their level
- learn to think more creatively as well as comparatively.