

**Welcome to**

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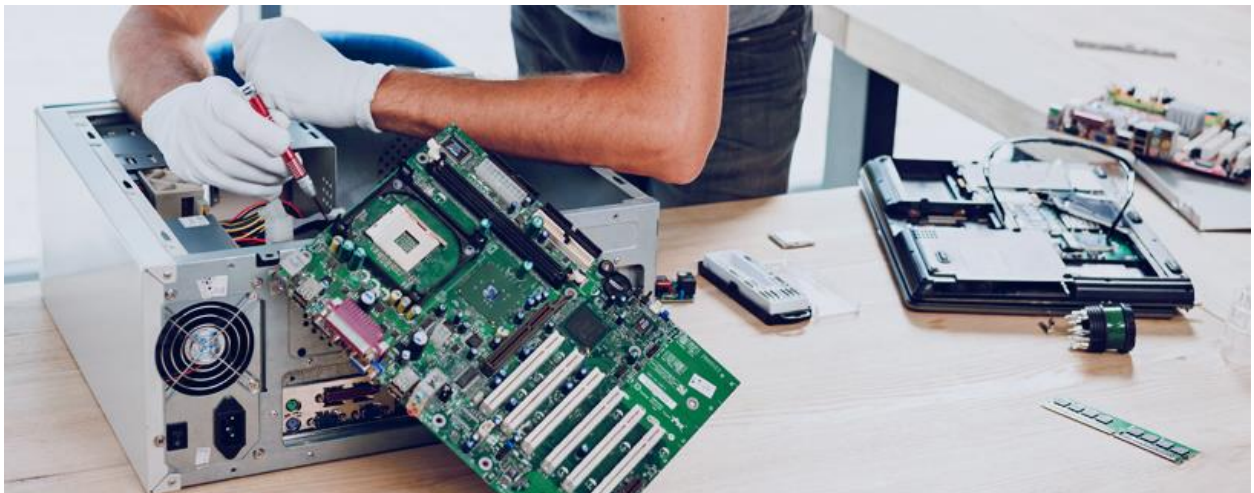
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# **IT CENTER SCHOOL OF TECHNOLOGY**



**Computer Support Course**

**Milestone July - Dec 2024**



## **COURSE OVERVIEW**

This course prepares students to take the Computer Support exams. Topics covered include hardware components, mobile devices, networking, operating systems, security, troubleshooting, and more.

## **CAREER OBJECTIVES**

The career objective of the **Computer Support** is to equip students with the essential skills and knowledge required to excel in the field of computer support technicians. Upon completion, students will be prepared for roles such as [problem solvers](#), [networks technicians](#), [helpdesk technician](#), [computer technicians](#), [Computer Security Engineers](#), or [technical advisors](#). The comprehensive curriculum ensures that students can confidently utilize key technologies and tools, implement secure and protected computer and mobile devices and understand the full protection of online devices. This foundation will enable them to pursue career opportunities in various industries, contribute to innovative projects, and adapt to the evolving demands of the tech industry.

# COMPUTER TECHNICIAN: JACK OF ALL TRADES!



**1**  
EXPERT IN OPERATING SYSTEMS

**2**  
KNOW A LOT  
ABOUT HARDWARE



**3**  
ABLE TO INSTALL  
SOFTWARE



**4**  
COMMUNICATES  
EFFECTIVELY



**5** A PATIENT PERSON



**6**  
A GOOD  
LISTENER

**7**  
EMPATHETIC

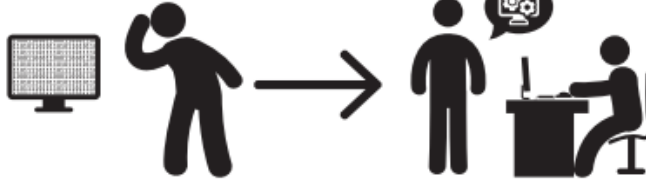


**8**  
JUGGLER OF TIME  
AND PRIORITIES



01100  
10110  
11110  
...

**9**  
A PROBLEM  
SOLVER



**10**  
CAN TRANSLATE TECHNICAL  
INFORMATION SO OTHER  
PEOPLE CAN UNDERSTAND

## **WEEK 1**

### **Introduction**

Personal Computer Concepts  
Hardware vs. Software  
PC Communication  
Hardware Requirements  
Personal Computer Concepts  
Becoming an IT Professional  
Working with End Users

## **WEEK 2**

### **Hardware Components**

#### **Motherboards**

Data Communication  
Chipsets  
Northbridge and Southbridge  
Connector Types  
Installing and Replacing a Motherboard

#### **Firmware**

BIOS/CMOS  
UEFI  
POST  
Configuring the BIOS  
Security Settings

#### **Power Supplies**

Installation Considerations  
Powering Drives  
Motherboard Power  
Replacing Power Supplies

#### **Central Processing Unit (CPU)**

CPU Architecture  
Cooling

#### **Memory**

Memory Units  
DDR RAM  
Error Recovery

## **Storage**

Drive Architecture

Drive Speeds

Magnetic Drives

SSD Overview

Optical Drives

## **DVD**

DVD Types

Blu -Ray Types

Installing Optical Drives

RAID Technologies

## **WEEK 3**

### **Printers and Scanners**

Printer Types

Dot Matrix

Inkjet Printers

Laser Printers

Thermal Printers

3D Printers

Installing Printers

Configuration Settings

Network Printers

Printer Security

Troubleshooting Printing and Scanning

## **WEEK 4**

### **Mobile Devices**

Mobile Hardware

Batteries

Power Management

Mobile Device Components

Laptop RAM

Laptop Drives

Laptop Displays

LCD Types

Display Components

## **Tablets**

Tablet Features

Smartwatch Features

Mobile Device Synchronization

Mobile Device Management

Cellular Data Networks

## **WEEK 5**

### **Computer Networking**

Networking Fundamentals

Network Models

Workgroups Domains

Network Clients

Network Categories

Internet Connection Types

### **Network Devices**

Device Capabilities

Hubs, routers, Modems and switches

Wireless Access Points

Patch Panel

### **Cables and Connectors**

Twisted Pair Cabling

UTP Categories

EIA/TIA

Coaxial Cables

Fiber Optic Cables

Fiber Connectors

### **Network Tools**

TCP/IP Fundamentals

Protocol Suite

Protocols and Ports

Basic IPv4 Configuration

IPv6 Benefits

Configuring IPv4

DNS Name Resolution

## **WEEK 6**

### **Hardware and Network Troubleshooting**

Troubleshooting Models

Troubleshooting Power, motherboard, CPU, Memory and drive Issues

Troubleshooting Display Issues

Troubleshooting Network Issues

Common Network Symptoms

Network Troubleshooting Tools

Troubleshooting Mobile Devices

Mobile Device Common Symptoms

Troubleshooting Printer Issues

## **WEEK 7**

### **Virtualization and Cloud Computing**

Understanding Virtualization, benefits and components

Desktop Virtualization

Basic Cloud Concepts

What is Cloud Computing?

Cloud Advantages

Cloud Models

Cloud Services Models

## **WEEK 8**

### **Introduction to Operating Systems**

OS Types

UNIX/Linux

Macintosh

Mobile Operating Systems

Operating System Functions

Reading and Writing Data

Managing Applications

Controlling Hardware

Managing Device Drivers

## **WEEK 9**

### **Installing Windows Operating Systems**

Installation Types  
Installation Methods  
Disk Imaging Process  
Boot Methods  
Performing Upgrades

## **WEEK 10**

### **Windows Configuration and Management**

Introduction to Windows 10  
Windows 10 Versions  
Windows 10 Builds  
Using Control Panel and Settings  
Management Overview  
Introducing Control Panel  
Using Control Panel and PC Settings

### **Using Graphical Administrative Tools**

Computer Management  
Using Command Line Administrative Tools  
Introduction to CLI

### **Configuring Networking**

Windows Networking  
TCP/IP Configuration  
SOHO Networks  
Understanding Workgroups  
Understanding Domains  
Remote Desktop

### **Windows Defender Firewall**

Establishing Network Connections  
Operating System Security  
Workgroup Authentication  
Domain Authentication  
Windows 10 Authentication Options  
Understanding Permissions  
NFTS Permissions

### **Shared Folder Permissions**

Permissions Rules  
Encrypting File System  
Encryption Process

## **BitLocker**

BitLocker to Go

BitLocker Modes

## **User Account Control**

Configuring UAC

## **WEEK 11**

### **Macintosh and Linux Operating Systems**

Mac and Linux Overview

Mac OS X

Linux

OS Features and Tools

Multiple Desktops / Mission Control

iCloud

Disk Maintenance

Shell / Terminal

Screen Sharing

Driver / Firmware Updates

Antivirus Updates

### **Basic Command Line Administration in Linux**

Overview of Linux CLI

Linux Tools

## **WEEK 12**

### **Security**

Understanding Threats to Security

User Threats Social Engineering

Phishing

Network Threats

Vulnerabilities

Physical Access Restrictions

Antimalware

### **Firewalls**

Hardware Firewalls

Firewall Functionality

User Authentication

Data Loss Prevention

Securing Workstations

Account Management

Data Encryption

Patch Management

### **Securing Mobile Devices**

Mobile Devices Screen Locks

Finding Mobile Devices

Backup Mobile Devices

Antimalware and Updates

Encryption and Biometrics

Data Destruction and Disposal Methods

Recycling or Repurposing

### **Security for SOHO and Wireless Networks**

SOHO Networks

Wireless SOHO Networks

Wireless Security Configuration

Device Configuration

Security for SOHO and Wireless Networks

Security Configuration on Router

## **Week 13**

### **Software Troubleshooting**

Troubleshooting Operating Systems

Common Symptoms

Common Solutions

Troubleshooting Mobile Devices

Common Security Issues

Troubleshooting Tools for Mobile Devices

Troubleshooting Security Issues

Best Practices for Malware Removal

## **Week 14**

### **Operational Procedures**

Disaster Recovery and Prevention

Backup and Recovery

Common Safety Procedures

Electrical Safety Static Electricity ESD Prevention Personal Safety

Safety for You and Computer Components

**Week 15**

**FINAL PROJECT**

*GOOD LUCK!!!*