Course: **CompTIA IT Fundamentals (ITF+), Computer Repairs and Maintenance**

Guided Learning Hours: 24

Pre-requisite: **Computer Literacy**

Abstract

This practical course allows participants to understand how computers work by focusing on various components and operating systems.

Target Audience

- IT Technicians
- Help Desk Technicians
- Anyone considering a career in IT

Learning Outcomes

On completion of this course, learners will be able to:

1. Identify IT concepts and terminology
2. Classify, set up and install Infrastructure
3. Understand and manage different types of applications and software
4. Identify software development concepts
5. Explain database fundamentals
6. Identify and explain security measures

Course Content

1. **Identify IT concepts and terminology**
   - Compare and contrast notational systems
   - Compare and contrast fundamental data types and their characteristics
   - Illustrate the basics of computing and processing
   - Explain the value of data and information
   - Compare and contrast common units of measure

- Explain troubleshooting methodology

2. **Classify, set up and install infrastructure**
   - Classify common types of input/output device interfaces
   - Set up and install common peripheral devices to a laptop/PC
   - Explain the purpose of common internal computing components
   - Compare and contrast common Internet service types
   - Compare and contrast storage types
   - Compare and contrast common computing devices and their purposes
   - Explain basic networking concepts
   - Install, configure and secure a basic wireless network

3. **Understand and manage different types of applications and software**
   - Explain the purpose of operating systems
   - Compare and contrast components of an operating system
   - Explain the purpose and proper use of software
   - Explain methods of application architecture and delivery models
   - Configure and use web browsers
   - Compare and contrast general application concepts and uses

4. **Identify software development concepts**
   - Compare and contrast programming language categories
   - Use programming organizational techniques and interpret logic
   - Explain the purpose and use of programming concepts

5. **Explain database fundamentals**
   - Explain database concepts and the purpose of a database
   - Compare and contrast various database structures
   - Summarize methods used to interface with databases

6. **Identify and explain security measures**
   - Summarize confidentiality, integrity and availability concerns
   - Explain methods to secure devices and best practices
   - Summarize behavioural security concepts
   - Compare and contrast authentication, authorization, accounting and non-repudiation concepts
   - Explain password best practices
   - Explain common uses of encryption
   - Explain business continuity concepts

Assessment Criteria

In order to achieve Learning Outcome…	The Learner must…
1. Identify IT concepts and terminology	Display understanding of Binary, Hex, Decimal. Differentiate Input, Output, Storage and Processing
2. Classify, set up and install infrastructure	Show capability to Install and identify major hardware Define core networking concepts and identify major networking hardware
3. Understand and manage different types of applications and software	Install and Configure Operating Systems Configure Accessibility Options

4. Identify software development concepts	Conceptualize programming basics.
	Compare and contrast programming language
	    -Scripting languages
	    -Scripted languages
	    -Markup languages
	    -Compiled programming languages
	    -Query languages
	    -Assembly language

5. Explain database fundamentals	Describe database structures - Structured vs. semi-structured vs. non-structured - Relational databases - Non-relational databases
6. Identify and explain security measures	Identify Security Threats Apply Security Best Practices Perform Secure Web Browsing

Essential Learning Resources:

Textbook
CompTIA-Fundamentals-FC0-U61-Guide-Certification

Website
www.sbcs.edu.tt