

## **Syllabus**

### **GENERAL INFORMATION**

Course Title: IT Fundamentals Laboratory  
Code: CCNL 1000  
Contact Hours: 56.25 Hours  
Academic Term: January 25, 2021 – March 31, 2021  
Professor: Joel Vargas Ramos  
E-Mail: [jvargas@passwordpr.com](mailto:jvargas@passwordpr.com)

### **COURSE DESCRIPTION**

Successful students will have the knowledge required to assemble components based on customer requirements, install, configure and maintain devices, PCs and software for end users, understand the basics of networking and security / forensics, property and safely diagnose, resolve and document common hardware and software issues, apply troubleshooting skills, provide appropriate customer support, and understand the basics of virtualization, desktop imaging, and deployment.

### **OBJECTIVES**

This course will teach the student the fundamental principles of installing, configuring, and troubleshooting PC, mobile, printer, and networking device hardware and help you to progress a career in PC support. It will prepare the student take the CompTIA FC0-U51 exam by providing 100 coverage of the objectives and content examples listed.

### **THEMATIC CONTENT**

- I. Core Hardware Component (Introduction)**
  - Unit 1.1 Introducing Internal Components
  - Unit 1.2 Exploring Motherboards, Processors and Memory
  - Unit 1.3 Exploring Storage and Expansion Devices
  - Unit 1.4 Exploring Power and Cooling
  
- II. Peripherals and Connectors**
  - Unit 2.1 Audio, Video and Printers
  - Unit 2.2 Input Devices
  - Unit 2.3 External Storage and other Connectors\
  
- III. Troubleshooting Method and Operating Systems**
  - Unit 3.1 Operating System Fundamentals
  - Unit 3.2 Navigating an Operating System

- IV. Networking Technologies and Wireless Routers**
  - Unit 4.1 Connection Types and Features
  - Unit 4.2 Network Connectivity Essentials
  - Unit 4.3 Setting Up a SOHO Router
  
- V. Network Sharing and Storage**
  - Unit 5.1 Local Network Sharing
  - Unit 5.2 Web Based Sharing and Access
  
- VI. Security Threats**
  - Unit 6.1 Understanding Hacking
  - Unit 6.2 Understanding Security Threats
  
- VII. Software Applications**
  - Unit 7.1 Common Software Applications and File Types
  - Unit 7.2 Software Management Best Practices
  
- VIII. Security Best Practices**
  - Unit 8.1 Computer and Network Security Best Practices
  - Unit 8.2 Internet Security Best Practices
  - Unit 8.3 Exploring Storage and Expansion Devices
  - Unit 8.4 Exploring Power and Cooling
  
- IX. Computer Support and Backups**
  - Unit 9.1 Basic Computer Support Concepts
  - Unit 9.2 Computer Backups
  
- X. Environmental and Safety Concepts**
  - Unit 10.1 Safe interactions with Computers

**Laboratories:**

- Lab 1- Hardware Components
- Lab 2- Motherboards, Ports, Slots and Parts
- Lab 3- My Local Network
- Lab 4- Wireless and Wired Standards
- Lab 5- Social Engineering Attack
- Lab 6- Discover your own risky behavior

### Homework Labs:

- Homework Lab 1- Motherboard and Components
- Homework Lab 2- Display Devices
- Homework Lab 3- Router Configuration and Network

### Evaluation Criteria

CRITERIA	Grade total
Laboratories 1-3	100
Laboratories 4-6	100
Homework Labs 1-4	100
Attendance	100
Total	400

### EDUCATIONAL RESOURCES

- Docter, Q. (2019). *CompTIA IT Fundamentals Study Guide: Exam FC0-U61*. (2<sup>nd</sup> Edition). Indianapolis, Indiana. Sybex.
- <http://passwordtech.edu20.org>

### NOTES

**Reasonable Accommodation:** Any student who requires reasonable accommodation must request them at the beginning of the course or as soon as they acquire the required knowledge through the Professor in charge and be notifying the Academic Director.

**Honesty, fraud, plagiarism:** Dishonesty, fraud, plagiarism and any other inappropriate behavior about the student's academic performance, constitute violations of the catalog of the institution, its Rules of Conduct and Duties of Student. Major infractions, as provided in the catalog may result in the suspension of the institution for a defined time or permanent expulsion as stipulated in the Rules of Conduct and Duties of Student.