

COURSE NET2080: LAPTOPS & PERIPHERALS

Level: Intermediate

Prerequisite: None

Description: Students develop an understanding of laptops, portable devices, printers and scanners. They acquire knowledge of industry standards for network cables and gain practical experience through installing cabling, connectors and other hardware components.

Parameters: Designed to be delivered in conjunction with other intermediate level courses in computer networking systems. Schools have the option of delivering courses in conjunction with one or more project courses if they wish to extend learning and/or address other specific technologies.

Access to an appropriate computer work station, the Internet, networking hardware, software and tools, and consumable supplies.

Access to instruction from an individual with specialized knowledge and skills in computer networking.

Particular emphasis is placed on Institute of Electrical and Electronics Engineers (IEEE) standards for cabling, and on safe procedures for preparing and connecting network media and devices. Students model and assume personal responsibility for ethical behaviour in their use of networking technologies and in their access to electronic sources of information. They also demonstrate an understanding of industry-based policies regarding network use and security.

Supporting Course: NET2020: Workstation Technology & Operations

Outcomes: The student will:

- 1. identify the fundamental principles of using laptops and portable devices**
 - 1.1 identify names, purposes and characteristics of laptop-specific devices/hardware
 - 1.2 identify and distinguish between mobile and desktop motherboards and processors including throttling, power management and Wi-Fi
- 2. install, configure, optimize and upgrade laptops and portable devices**
 - 2.1 configure power management options
 - 2.2 demonstrate the safe removal of laptop-specific hardware such as peripherals, hot-swappable devices and non-hot-swappable devices
- 3. identify tools, basic diagnostic procedures and troubleshooting techniques for laptops and portable devices**
- 4. identify and apply common preventive maintenance techniques for laptops and portable devices; e.g., cooling devices, hardware and video cleaning materials, operating environments including temperature and air quality, storage, transportation and shipping**

- 5. identify the fundamental principles of using printers and scanners**
 - 5.1 identify differences between types of printer and scanner technologies; e.g., laser, inkjet, thermal, solid ink, impact
 - 5.2 identify names, purposes and characteristics of printer and scanner components; e.g., memory, driver, firmware, consumables such as toner, ink cartridge and paper
 - 5.3 identify the names, purposes and characteristics of interfaces used by printers and scanners including port and cable types
- 6. identify basic concepts of installing, configuring, optimizing and upgrading printers and scanners**
 - 6.1 install and configure printers/scanners
 - 6.2 optimize printer performance including:
 - 6.2.1 printer settings; e.g., tray switching
 - 6.2.2 print spool settings
 - 6.2.3 device calibration
 - 6.2.4 media types
 - 6.2.5 paper orientation
- 7. identify tools, basic diagnostic procedures and troubleshooting techniques for printers and scanners**
 - 7.1 gather information about printer/scanner problems
 - 7.2 review and analyze collected data
 - 7.3 identify solutions to identified printer/scanner problems
- 8. demonstrate established laboratory procedures and safe work practices**
- 9. demonstrate basic competencies**
 - 9.1 demonstrate fundamental skills to:
 - 9.1.1 communicate
 - 9.1.2 manage information
 - 9.1.3 use numbers
 - 9.1.4 think and solve problems
 - 9.2 demonstrate personal management skills to:
 - 9.2.1 demonstrate positive attitudes and behaviours
 - 9.2.2 be responsible
 - 9.2.3 be adaptable
 - 9.2.4 learn continuously
 - 9.2.5 work safely
 - 9.3 demonstrate teamwork skills to:
 - 9.3.1 work with others
 - 9.3.2 participate in projects and tasks
- 10. identify possible life roles related to the skills and content of this cluster**
 - 10.1 recognize and then analyze the opportunities and barriers in the immediate environment
 - 10.2 identify potential resources to minimize barriers and maximize opportunities