

HIGHER NITEC IN TECHNOLOGY – CYBER & NETWORK SECURITY

Course Code: HTCNZ

COURSE OBJECTIVE

This course provides students with skills and knowledge to support cyber security related tasks on end-user devices, networks, servers and cloud services to enhance the security of the organisation's IT environment. These tasks include vulnerability scanning, incident monitoring and reporting as well as risk mitigation.

COURSE STRUCTURE

S/N	Module Details	Module Code	Module Objectives
C1	Enterprise Networking 39 hrs (T) 81 hrs (P) Credits: 7 Prerequisite: Nil	IT4045FP	On completion of the module, students should be able to apply the fundamentals of computer networking in relation to the OSI model. They should also be able to set up and configure wired and wireless local area network (LAN) including IP address calculation, switching, routing and network segmentation with Virtual LANs (VLANs). In addition, students will be able to set up wide area network (WAN), implement access control lists, troubleshoot common network issues and problems as well as monitor network performance.
		Equivalent Code Nil	
C2	System Administration 39 hrs (T) 81 hrs (P) Credits: 7 Prerequisite: Nil	IT4043FP	On completion of the module, students should be able to install and set up server operating systems and perform system administration tasks such as user management, resource sharing, security management, preventive maintenance, and performance tuning on these systems. Students will then proceed to perform value-added features such as implementing server security and high-availability systems.
		Equivalent Code Nil	
C3	Virtualization 27 hrs (T) 93 hrs (P) Credits: 6 Prerequisite: Nil	IT4044FP	On completion of the module, students should be able to set up a hypervisor with virtual machines (VMs) and configure clients' access to these VMs. They should also be able to perform backup and recovery of VMs, monitor resource utilisation on the hypervisor, troubleshoot performance and connectivity issues as well as assisting in securing the virtualised infrastructure. They will be introduced to commercially available cloud services and be able to utilise them.
		Equivalent Code Nil	
C4	IT Security 39 hrs (T) 81 hrs (P) Credits: 7 Prerequisite: Nil	IT5045FP	On completion of the module, students should be able to carry out network intrusion detection, prevention and mitigation through the implementation of intrusion detection system (IDS), firewalls, application gateways, and data encryption technologies. They should also be able to implement appropriate technologies to protect against security attacks such as spams, spyware, worms/viruses, phishing and address spoofing.
		Equivalent Code Nil	
C5	Security Operations 27 hrs (T) 93 hrs (P) Credits: 6 Prerequisite: Nil	IT5046FP	On completion of the module, student should be able to comply with the prevalent cyber security laws. They should be able to take up tasks in a Security Operations Centre (SOC) environment including the configuration of Security Information and Event Management (SIEM) systems, monitoring and identifying security risks, analyzing and classifying security alerts, preparing for and conducting vulnerability
		Equivalent Code Nil	

S/N	Module Details	Module Code	Module Objectives
			scanning, documenting identified vulnerabilities, and applying appropriate counter measures to mitigate identified threats.

Abbreviations: T - Theory, P - Practical

CREDITS FOR CERTIFICATION

Total of 33 credits from successful completion of 5 modules.

VENUE

ITE College East, ITE College West

Note:

- 1) The training schedule of lessons is subject to change.
- 2) Depending on the demand, not all the modules in the CET *Higher Nitec* in Technology courses will be offered in each intake. Where the modules are offered and there is insufficient enrolment, the classes will be cancelled and a full refund will be given to the affected students.