

COURSE NAME: Network III: Advanced LAN Design and Protocols		COURSE CODE: ITNT3203
PRE-REQUISITE: Network II: Routing and Switching Essentials		CREDIT HOURS: 3
PASSING GRADE: <u>C</u>		LEVEL: ADVANCED DIPLOMA
NO. OF THEORY & PRACTICAL HOURS (1:4)		
Goal: An introduction to LAN switching, virtual LANs and advanced router configuration. Also to introduce the students to the theoretical and practical concepts of a Local Area Network and providing students with hands-on experience using a popular network operating system.		
Objectives: Students will be introduced to problems inherent in a LAN and possible solutions to improve LAN performance.		
<u>OUTCOMES</u>		Method
1	Understand, configure and troubleshoot enhanced switching technologies such as VLANs, Rapid Spanning Tree Protocol (RSTP), Per VLAN Spanning Tree Plus Protocol (PVST+), and EtherChannel	Practical
2	Understand, configure, and troubleshoot first hop redundancy protocols (HSRP) in a switched network	Practical
3	Understand, configure, and troubleshoot wireless routers and wireless clients	Practical
4	Configure and troubleshoot routers in a complex routed IPv4 or IPv6 network using single-area OSPF, multiarea OSPF, and Enhanced Interior Gateway Routing Protocol (EIGRP)	Practical
5	Manage Cisco IOS® Software licensing and configuration file	Theory
Hardware Tools: Refer on the link: https://www.netacad.com/group/program/equipment - information Software Tools: CISCO Packet tracer 6.0 or higher		
Book: Cisco Networking Academy (2014), Introduction to Networking, CISCO Press		
Reference Material: CISCO Networking Academy, http://cisco.netacad.net , access on 6-April 2014		