SYLLABUS: Network and Internet services	CREDITS: 8

COMPETENCES
AFTER COMPLETING THIS COURSE, STUDENTS WILL BE ABLE TO: C1: Install, configure and manage network services (web, e-mail, file transfer ...).   C2: To diagnose the malfunctions of the system and take corrective measures to restore its functionality.   C3: Perform maintenance of resources based on workloads and maintenance plan.

COMPETENCES DISTRIBUTION		
COMPETENCE	ESSENTIAL 90% TIME 90% MARK	IDEAL 10% TIME 10% MARK
C1.1: Install, configure and manage DNS service.	X	
C1.2: Install, configure and manage DHCP service.	X	
C1.3: Install, configure and manage Web servers.	X	
C1.4: Create and configure virtual sites.	X	
C1.5: Obtain and install digital certificates.	X	
C1.6: Install, configure and manage file transfer servers.	X	
C1.7: Install, configure and manage an e-mail server.	X	
C1.8: Install, configure and manage instant messaging, news and distribution lists services.	X	
C1.9: Manage audio services.	X	
C1.10: Install and configure audio services.		X
C1.11: Manage video services.	X	
C1.12: Install and configure video services.		X
C2: Diagnose the malfunctions of the system and take corrective measures to restore its functionality.	X	
C3: Perform maintenance of resources based on workloads and maintenance plan.	X	

CONTENTS
Installation and administration of domain name services: - Hierarchical names systems.   - Solvers names. Resolution process a domain name.   - Root Servers and TLDs and beyond.   - Primary and secondary zones. Zone transfers.   - Types of records.   - Name Servers dynamic IP addresses.   Installation and administration of DHCP: - Operation of the service.   - Assignments. Types.   - Parameters and configuration statements.   - Commands used to operate the service.   Installation and administration of web servers: - General characteristics of a web server.

- Basic configuration of a web server.
- Modules. Installation, configuration and use.
- Virtual Hosts. Creation, configuration and use.
- Authentication and access control.
- Certificates. Certificate servers.
- Web browsers. Parameters appearance and use.

Installation and administration of file transfer service:
- Configuration of file transfer service. Permits and quotas.
- Types of users and access to the service.
- Client connection modes.
- Types of file transfer.
- Operation of the service.
- Assignments. Types.
- Parameters and configuration statements.
- Commands used to operate the service.

Installation and administration of e-mail service:
- Message Transfer Protocol.
- Email Clients.
- Mail accounts, user aliases and mailboxes.
- Secure Mail, message encryption and digital signature.
- Protocols and mail download services.

Installation and administration of instant messaging , news and mailing lists services:
- Features instant messaging service. Protocols.
- Graphics IM clients.
- Customers in text mode IM.
- Features service distribution lists. Protocols.
- Types of access to the distribution list.
- Types of distribution lists.

Installation and administration of audio service:
- Audio formats.
- Servers streaming.
- Organize and subscription audio. Podcast.

Installation and administration of video service:
- Image formats.
- Video Servers.
- Video formats. Codecs and players.
- Organize and subscription video.
- Audio formats.
- Servers streaming.
- Organize and subscription audio. Podcast.