



Sandip University

Trimbak Road, A/p - Mahiravani, Tal. & Dist. – Nashik, Pin – 422 213
 Website : <http://www.sandipuniversity.edu.in> Email : info@sandipuniversity.edu.in

Ph: (02594) 222 541 Fax: (02594) 222 555

School of Computing Sciences & Engineering
Department of Computer Science & Applications
Course Structure for Undergraduate Programme of Bachelor of Computer Application [B.C.A (CTIS)]
Semester - IV

IV	XCT401				XCT402				XCT403/ XCT411				XCT404				XCT405/ XCT412				XCT406															
	L	T	P	C	L	T	P	C	L	T	P	C	L	T	P	C	L	T	P	C	L	T	P	C					L	T	P	C				
	3			3	3			3	3		4	5	3			3	3		4	5				0												
	UC				PC				PC				PC				PC				UC															
Principles of Virtualization				Network Administration				Installation and Configuration of server				Cryptography				Network Security				Employability Skills								15	0	8	19	23				



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School: Computer Sciences and Applications

Programme: BCA- CTIS

Year : Second Year

Semester – IV

Course: Principles of Virtualization

Course Code: XCT401

	L	T	P	C
	3	--	--	3

Theory: 3 Hrs/Week

Max. University Theory Examination:50 Marks

Max. Time for Theory Exam.:3 Hrs

Continuous Internal Assessment:50 Marks

Objectives	
1	Virtualization is the single most effective way to reduce IT expenses while boosting efficiency and agility in organizations.
2	This course explores the implementation and usage of VMWare Virtualization, its installation process and the working of Windows Server hyper V.
Outcomes	
1	Understanding the principles of virtualization and Cloud Computing
2	To learn and practice the virtualization frameworks like, VMWare, Windows Server hyper V etc.



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Unit Number	Details	Hours
1	<ul style="list-style-type: none">• Basics of Virtualization <ol style="list-style-type: none">1. Understanding Virtualization, Need of Virtualization and Virtualization Technologies: Server Virtualization, Storage Virtualization, I/O Virtualization,2. Network Virtualization, Client Virtualization, Application virtualization, Desktop virtualization,3. Understanding Virtualization Uses: Studying Server Consolidation, Development and Test Environments , Helping with Disaster Recovery	10
2	<ul style="list-style-type: none">• Basics of Network Devices <ol style="list-style-type: none">1. Deploying and Managing an Enterprise Desktop Virtualization Environment configure the BIOS to support hardware virtualization; Install and configure Windows Virtual PC:2. installing Windows Virtual PC on various platforms (32-bit, 64-bit), creating and managing virtual hard disks, configuring virtual machine resources including network resources,3. preparing host machines; create, deploy, and maintain images	10
3	<ul style="list-style-type: none">• Deploying and Managing Presentation Virtualization Environment <ol style="list-style-type: none">1. Prepare and manage remote applications: configuring application sharing,2. package applications for deployment by using RemoteApp, installing and configuring the RD Session Host Role Service on the server	10



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4	<ul style="list-style-type: none"> • Accessing Published Applications 1. Access published applications: configuring Remote Desktop Web Access, configuring role-based application provisioning, 2. configuring Remote Desktop client connections. Configure client settings to access virtualized desktops: configuring client settings 	15
5	<ul style="list-style-type: none"> • Understanding Virtualization Software 1. List of virtualization Software available . Vmware- introduction to Vsphere, ESXi, VCenter Server and Vsphere client. 2. Creating Virtual Machine.. Introduction to HYPER-V role. Create Virtual Machines. 3. Create Hyper-v virtual networking, Use virtual Machine Snapshots. Monitor the performance of a Hyper-v server, Citrix XENDesktop fundamentals 	15
Total Hours		60

Resources	
Recommended Books	<ol style="list-style-type: none"> 1. Virtualization with Microsoft Virtual Server 2005 by Twan Grotenhuis, Rogier Dittner, Aaron Tiensivu, Ken Majors, Geoffrey Green, David Rule, Andy Jones, Matthijs ten Seldam, Syngress Publications, 2006
Reference Books	<ul style="list-style-type: none"> • Virtualization--the complete cornerstone guide to virtualization best practices, Ivanka Menken, Gerard Blokdijk, Lightning Source Incorporated, 2008. • Virtualization: From the Desktop to the Enterprise, Chris Wolf, Erick M. Halter, EBook, 2005



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School: Computer Sciences and Applications

Programme: BCA- CTIS

Year : Second Year

Semester - IV

Course: Network Administration

Course Code: XCT402

	L	T	P	C
	3	--	--	3

Theory: 3 Hrs/Week

Max. University Theory Examination:50 Marks

Max. Time for Theory Exam.:3 Hrs

Continuous Internal Assessment:50 Marks

Objectives	
1	This course introduces the architecture, functions, and components of the Internet and computer networks, the principles and structure of IP addressing and subnetting, the fundamentals of Ethernet, the architecture, components and operations of routers, routing protocols and switches in a network.
2	Topics include TCP/IP, Ethernet, IPv4, routers, switches. As we cover these topics, the students will learn how the internals of the Internet work to support the Web and other networked applications.
3	After completing the course the students will develop a detailed understanding of how to configure, implement and troubleshoot widely-used networking technologies.



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Outcomes	
1	Demonstrate essential IT support skills including installing, configuring, securing and troubleshooting operating systems and hardware
2	Demonstrate essential networking skills including installing, configuring, securing and troubleshooting the devices, protocols and services within a network infrastructure
3	Demonstrate the ability to diagnose and solve network problems.

Unit Number	Details	Hours
1	<ul style="list-style-type: none"> • Networking Fundamentals: 1. The TCP/IP and OSI Networking Models, Fundamentals of Ethernet LANs, Fundamentals of WANs, 2. Fundamentals of IPv4 Addressing and Routing, Fundamentals of TCP/IP Transport and Applications, 3. Ethernet LANs and Switches: Building Ethernet LANs with Switches, Cisco LAN Switches, Configuring Ethernet Switching. 	10
2	<ul style="list-style-type: none"> • IP Version 4 Addressing and Subnetting: 1. Perspectives on IPv4 Subnetting, Analysing Class full IPv4 Networks, Analysing Subnet Masks, Analysing Existing Subnets, 2. Implementing IP Version 4: Operating Cisco Routers, Configuring IPv4 Addresses and Routes, Implementing Ethernet Virtual LANs, 3. Troubleshooting Ethernet LANs, Spanning Tree Protocol Concepts, Troubleshooting LAN Switching. 	10



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3	<ul style="list-style-type: none">• LAN Routing: <ol style="list-style-type: none">1. Configure IPv4 Routing, Configure and Verify Host Connectivity, Advanced IPv4 Addressing Concepts,2. Describe the boot process of Cisco IOS routers; Operation status of a serial interface; Manage Cisco IOS files; Routing and Routing Protocols; OSPF (multi-area); EIGRP (single AS); Passive Interface	15
4	<ul style="list-style-type: none">• IPv4 Services and IP Version 6: <ol style="list-style-type: none">1. Basic IPv4 Access Control Lists, Advanced IPv4 ACLs and Device Security, Network Address Translation, Recognize high availability (FHRP);2. Describe SNMP v2 and v3, IPV6 addressing	15
5	<ul style="list-style-type: none">• Network Address Translation: <p>Types of Network Address Translation, NAT Names, How NAT Works Testing and Troubleshooting NAT</p>	10
Total Hours		60



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Resources	
Recommended Books	1. CCNA Cisco Certified Network Associate: Study Guide (With CD) 7th Edition (Paperback), Wiley India, 2011
Reference Books	<ol style="list-style-type: none">1. CCENT/CCNA ICND1 650-822 Official Cert Guide 3 Edition (Paperback), Pearson, 20132. Routing Protocols and Concepts CCNA Exploration Companion Guide (With CD) (Paperback), Pearson, 20083. CCNA Exploration Course Booklet : Routing Protocols and Concepts, Version 4.0 (Paperback), Pearson, 2010



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School: Computer Sciences and Applications

Programme: BCA- CTIS

Year : Second Year

Semester - IV

Course: Installation and Configuration of Server

Course Code:XCT403

	L	T	P	C
	3	--	--	3

Theory: 3 Hrs/Week

Max. University Theory Examination:50 Marks

Max. Time for Theory Exam.:3 Hrs

Continuous Internal Assessment:50 Marks

Objectives	
1	Windows Server 2012 R2 Foundation is an operating system that enables core IT resources, such as file and print sharing, remote access, and security.
2	On the Windows operating system, and upon which you can run the most popular business applications.
3	This course explores the method to install, upgrade, and deploy the Windows Server. Also, the learners will have the functional knowledge of configuring core network services and the active directory of Windows Server. This course provides the knowledge and skills necessary to plan and implement a Windows Server 2012 and Windows Server 2012 R2 environment.

Outcomes



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1	By the end of the course students will have overall knowledge about the installation and configuration of the server operating systems.
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Unit Number	Details	Hours
1	<ul style="list-style-type: none"> • Installing and Configuring Servers 1. Selecting a Windows Server 2012 Edition, Supporting Server Role, Supporting Server Virtualization, Server Licensing. 2. Installing Windows Server 2012: System Requirement, Performing a Clean Installation, Installing Third-Party Drivers, Working with Installation Partitions, Using Server Core, Server Core Defaults, Server Core Capabilities, Using the Minimal Server Interface, Upgrade paths, Preparing to Upgrade Installation, Installing Windows Server Migration Tools. 3. Configuring Servers: Completing Post-Installation Tasks and GUI Tools, Converting Between GUI and Server, Configuring NIC Teaming, Using Roles, Features, and Services, Using Roles Manager, Adding Roles and Features, Deploying Roles to VHDs, Configuring Services. 	15
2	<ul style="list-style-type: none"> • Configuring Local Storage 1. Planning Server Storage, Determining the Number of Servers Needed, Estimating Storage Requirements, Selecting a Storage Technology, Selecting a Physical Disk Technology, Using External Drive Arrays, 2. Planning for Storage Fault Tolerance, Using Disk Mirroring, Using RAID, Using Storage Spaces, Understanding Windows Disk setting, selecting a Partition style, understanding disk and Volume Types, 3. Choosing a Volume Size, Understanding File System, Working with Disks, Adding a New Physical Disk, Creating and Mounting VHDs, Storage Pool, Virtual Disks, Simple Volume, 4. Creating a Striped, Spanned, Mirrored, or RAID-5 Volume, Extending and Shrinking Volumes and Disks. 	15



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3	<ul style="list-style-type: none">● Configuring File and Share Access1. Designing a File-Sharing Strategy, Arranging Shares, Controlling Access, Mapping Drives, Creating Folder Shares, Assigning Permissions,2. Understanding the windows Permission Architecture and Basic, Advanced Permissions, Allowing and Denying Permissions, Inheriting Permissions, Understanding Effective Access, Setting Share3. Permissions, Understanding NTFS Authorization, Assigning Basic NTFS Permissions, Understanding Resource Ownership, Combining Share and NTFS Permissions.	10
4	<ul style="list-style-type: none">● Configuring Print, Document Services, Servers for Remote Management.1. Understanding the Windows Print Architecture and Printing, Server Printing Flexibility, sharing a Printer Drivers and Managing Printer Drivers, Using Remote Access Easy Print, Configuring Printer Security,2. Adding Printer Servers, Deploying Printers with Group Policy, Adding Server and Workgroup Servers, Calibrating Server Manager Performance, Configuring WinRM and Windows Firewall,3. Creating Server Groups, Using Remote Server Administration Tools, Using Windows PowerShell Web Access, Installing Windows PowerShell Web Access, Configuring the Windows PowerShell Web4. Access Gateway, Configuring a Test Installation, Customizing a Gateway Installation, Creating Authorization Rules, Working with Remote Servers.	10
5	<ul style="list-style-type: none">● Creating and Configuring Virtual Machine Settings and Storage1. Virtualization Architectures, Hyper-V Implementations and Licensing, Hyper-V Hardware Limitations and Server, Installing Hyper-V, Using Hyper-V Manager, Creating a VM, Installing an Operating System,2. Configuring Guest Integration Services, Allocating Memory, Using Dynamic Memory, working with Virtual Disks, Understanding Virtual3. Disk Formats, Creating Virtual Disks, Creating a New Virtual Disk, Adding Virtual Disks to Virtual Machines, Creating Differencing Disks,	10



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	4. Configuring Pass-Through Disks, Modifying Virtual Disks, Creating Snapshots, Connecting to a SAN, Connecting Virtual Machines to a SAN.	
Total Hours		60

Resources	
Recommended Books	<ol style="list-style-type: none"> 1. Windows Server 2012: A Handbook for Professionals by Aditya Raj (Author) 2. MCSA 70-410 Cert Guide R2: Installing and Configuring Windows Server 2012 (Certification Guide) Hardcover – Import, 12 Sep 2014 by Don Poulton (Author), David Camardella (Author)
Reference Books	<ol style="list-style-type: none"> 1. Installing and Configuring Windows Server 2012 by Craig Zacker 2. Mastering Windows Server 2012 R2 by Mark Minasi, Kevin Greene, Christian Booth, and Robert Butler.



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School: Computer Sciences and Applications		Programme: BCA- CTIS			
Year : Second Year		Semester - IV			
Course: Cryptography		Course Code:XCT404			
		L	T	P	C
		3	--	--	3
Theory: 3 Hrs/Week		Max. University Theory Examination:50 Marks			
Max. Time for Theory Exam.:3 Hrs		Continuous Internal Assessment:50 Marks			

Objectives	
1	Security is ubiquitous. With the advent of e-commerce and electronic transactions, the need for development of secured systems has grown tremendously
2	Cryptography is the study of building ciphers to ensure the confidentiality and integrity of information. Along with it is the activity of analysing the strength of a cipher by subjecting it to several forms attack.
3	This course covers the basic concepts of Cryptography, certain cryptographic algorithms and its applications.

Outcomes



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1	This course builds on the overview about information security, which includes an overview of public and secret key cryptosystems
2	Comprehend and apply authentication services and mechanisms
3	On completion of this course students will be able to apply the knowledge and skills obtained to study further concepts in information security

Unit Number	Details	Hours
1	<ul style="list-style-type: none"> Introduction to Cryptography <ol style="list-style-type: none"> The Confidentiality, Integrity & Availability (CIA) Triad, Cryptographic concepts, methodologies & practices, Symmetric & Asymmetric cryptography, public & private keys, Cryptographic algorithms and uses, Construction & use of Digital signatures 	10
2	<ul style="list-style-type: none"> Types of Algorithms <ol style="list-style-type: none"> The basic functionality of hash/crypto algorithms (DES, RSA, SHA, MD5, HMAC, DSA) and effects on key length concepts in Elliptical Curve Cryptography & Quantum Cryptography 	10



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3	<ul style="list-style-type: none">• Key Management <ol style="list-style-type: none">1. The basic functions involved in key management including creation, distribution, verification, revocation and destruction,2. storage, recovery and life span and how these functions affect cryptographic integrity	15
4	<ul style="list-style-type: none">• Application of Cryptography <ol style="list-style-type: none">1. Major key distribution methods and algorithms including Kerberos, ISAKMP etc., Vulnerabilities to cryptographic functions,2. the Use and functions of Certifying Authorities (CAs),Public Key Infrastructure (PKI) and3. System architecture requirements for implementing cryptographic functions	15
5	<ul style="list-style-type: none">• Identification protocols & Zero knowledge protocol <ol style="list-style-type: none">1. Password protocols, salts; one time passwords (S/Key and SecurID); Challenge response authentication.	10
Total Hours		60



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Resources	
Recommended Books	1. Information Systems Security: Security Management, Metrics, Frameworks and Best Practices by Nina Godbole
Reference Books	1. Cryptography and Security by C K Shyamala, N Harini and Dr T R Padmanabhan – Wiley Publications, First Edition



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School: Computer Sciences and Applications			Programme: BCA- CTIS	
Year : Second Year			Semester - IV	
Course: Network Security			Course Code: XCT405	
	L	T	P	C
	3	--	--	3
Theory: 3 Hrs/Week			Max. University Theory Examination:50 Marks	
Max. Time for Theory Exam.:3 Hrs			Continuous Internal Assessment:50 Marks	

Objectives	
1	The power of computers can be witnessed when multiple computers are connected to form a network and start sharing information amongst them.
2	But when this happens, the entire network becomes an open source and exposed to threats due to many users who log into these networks and their environments.
3	Therefore it becomes important to learn about Network Security, in order to safeguard our networks from hackers and damages. Learning network concepts therefore becomes significant and no study of computers is complete without them.



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Outcomes	
1	To master understanding external and internal threats to an organization
2	To be familiar with how threats to an organization are discovered, analyzed, and dealt with
3	To be familiar with network security designs using available secure solutions (such as PGP, SSL, IPSec, etc).

Unit Number	Details	Hours
1	<ul style="list-style-type: none"> Introduction to Network Security <ol style="list-style-type: none"> Perimeter Security – Overview of Network Security, Access Control, Device Security, Security features on Switches, 	10



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	<p>2. Firewall, Types of firewall, Access Management, Multifactor Authentication, Wireless LAN (WLAN) Security and Network Admission Control (NAC)</p>	
2	<ul style="list-style-type: none"> • Threats, Vulnerabilities and Attacks <ol style="list-style-type: none"> 1. Threat; Vulnerabilities; Attacks – Application Attack, Network Attack and Mitigating & Deterring Attacks; 2. Network Security – Security through network devices, Security through Network Technologies and 3. Security through Network Design Elements, Administering a Secure Network 	10
3	<ul style="list-style-type: none"> • Network Security Management <ol style="list-style-type: none"> 1. Secure Socket Layer (SSL) – Introduction to SSL, Open SSL basics, Problems with SSL, Cryptography, Message Digests Algorithms, Digital Signature and Public Key Infrastructure (PKI); 2. Data Privacy – IPsec VPN, Dynamic Multipoint VPN (DMVPN), Group Encrypted Transport VPN (GET VPN), Secure Sockets Layer VPN (SSL VPN) and Multiprotocol Label Switching VPN (MPLS VPN). 	15
4	<ul style="list-style-type: none"> • Network Security Controls <ol style="list-style-type: none"> 1. Network Intrusion Prevention – Overview of Intrusion Prevention System (IPS), Intrusion Detection System (IDS), 2. Deploying IPS and IPS high Availability; host Intrusion Prevention; Anomaly Detection and Mitigation 	15



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5	<ul style="list-style-type: none">• Network Management1. Security Monitoring and correlation; Security Management - Security and Policy Management and Security Framework2. Regulatory Compliance; Best Practices Framework, Case Studies.	10
Total Hours		60

Resources	
Recommended Books	1. Information Systems Security: Security Management, Metrics, Frameworks and Best Practices by Nina Godbole
Reference Books	<ol style="list-style-type: none">1. Operating System Concepts, 8th Edition by Abraham Silberschatz, Peter B. Galvin, Greg Gagne, Pub: John Wiley & sons, Inc., 2009.2. Information security: Principles and Practice - Mark Stamp, 2nd Edition, Pub: John Wiley & Sons, Inc., 2011



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School: Computer Sciences and Applications					Programme: BCA- CTIS
Year : Second Year					Semester - IV
Course: Lab Course Based on Installation and Configuration of Server					Course Code: XCT411
	L	T	P	C	
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					Practical Examination:p 25 Marks
Practical: UG -4 Hrs/Batch (30 Students)					Term Work :25 Marks

Objectives

1	Students will learn to configure Server configuration
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Unit Number	Details-Lab
1	List of Programs Group A <ol style="list-style-type: none"> 1. Installation windows Server 2012 (GUI Mode) 2. Installation windows Server 2012 (Server Core Installation)



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3. Server post configuration – Date, Time, Time Zone and Computer Name.
4. Server post configuration – Assigning IP address, Enabling Remote Desktop and Joining Domain.
5. NIC teaming configuration - Active/Active mode
6. NIC teaming configuration - Active/Standby mode
7. Add DHCP role and features in Windows Server 2012
8. Add DNS role and features in Windows Server 2012
9. Local Storage Configuration – Add a new HD, then initialize it with GPT.
10. Local Storage Configuration – Add a new HD, then initialize it with MBR.

Group B

1. Local Storage Configuration – Create Simple Volume of 2GB, Format it using NTFS file system and Delete the Volume created.
2. Local Storage Configuration – Expanding and shrinking the volume.
3. Local Storage Configuration – Creating a VHD.
4. Configuration File and Share Access – Create a folder and share it with different sharing permissions (Test with all permissions).
5. Configuration File and Share Access – Create a file and configure NTFS permissions (Test with all permissions).

Group C

1. Configuration Print and Document Services for Windows Server.
2. Configuration windows server for Remote Management.
3. Creating Virtual Machine in Windows Server.
4. Configuration and Setting Virtual Machine.



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Term Work:

Term Work assessment shall be conducted for the Project, Tutorials and Seminar. Term work is continuous assessment based on work done, submission of work in the form of report/journal, timely completion, attendance, and understanding. It should be assessed by subject teacher of the institute. At the end of the semester, the final grade for a Term Work shall be assigned based on the performance of the student and is to be submitted to the University.

Notes

1	The experiments from the regular practical syllabus will be performed (15 Marks).
2	The regular attendance of students during the syllabus practical course will be monitored and marks will be given accordingly (5 Marks).
3	Good Laboratory Practices (5 Marks)

Practical/Oral/Presentation:

Practical/Oral/Presentation shall be conducted and assessed jointly by internal and external examiners. The performance in the Practical/Oral/Presentation examination shall be assessed by at least a pair of examiners appointed as examiners by the University. The examiners will prepare the mark/grade sheet in the format as specified by the University, authenticate and seal it. Sealed envelope shall be submitted to the head of the department or authorized person.

Notes

1	One experiment from the regular practical syllabus will be conducted. (Total 15 Marks).
2	Complete laboratory journal/records (05 Marks).
3	Viva-voce (05 Marks).



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School: Computer Sciences and Applications					Programme: BCA- CTIS
Year :Second Year					Semester - IV
Course: Lab Course Based on Network Security					Course Code: XCT412
	L	T	P	C	
	--	--	4	2	
					Practical Examination:25 Marks
Practical: UG -4 Hrs/Batch (30 Students)					Term Work :25 Marks

Objectives

1	Students will be able to configure firewall
2	They can configure different device configuration for Security

Unit Number	Details-Lab
1	<p>List of Programs</p> <p>Group A</p> <p>1. Firewall Configuration- Wired Network (Access list)</p>



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2. Firewall Configuration- Wireless Network (SSID and Encrytion)
3. Firewall Configuration- Wireless Network (MAC binding and Application/port filtering)
4. VPN Configuration
5. IPS Configuration
6. IDS Configuration
7. Port Security in Switches
8. Router Security
9. Traffic Monitoring using Wireshark

Group B

1. Traffic Monitoring using other tools
2. Network Security risk assessment
3. Network security policies and standards
4. VLAN Configuration- Wired LANs
5. VLAN Configuration- Wireless LANs



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Group C

1. Defence in Depth & DMZs
2. Network Security for BYODs
3. Network security in Virtualization Environment.

Term Work:

Term Work assessment shall be conducted for the Project, Tutorials and Seminar. Term work is continuous assessment based on work done, submission of work in the form of report/journal, timely completion, attendance, and understanding. It should be assessed by subject teacher of the institute. At the end of the semester, the final grade for a Term Work shall be assigned based on the performance of the student and is to be submitted to the University.

Notes

1	The experiments from the regular practical syllabus will be performed (15 Marks).
2	The regular attendance of students during the syllabus practical course will be monitored and marks will be given accordingly (5 Marks).
3	Good Laboratory Practices (5 Marks)

Practical/Oral/Presentation:



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Practical/Oral/Presentation shall be conducted and assessed jointly by internal and external examiners. The performance in the Practical/Oral/Presentation examination shall be assessed by at least a pair of examiners appointed as examiners by the University. The examiners will prepare the mark/grade sheet in the format as specified by the University, authenticate and seal it. Sealed envelope shall be submitted to the head of the department or authorized person.

Notes	
1	One experiment from the regular practical syllabus will be conducted. (Total 15 Marks).
2	Complete laboratory journal/records (05 Marks).
3	Viva-voce (05 Marks).



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School: Computer Sciences and Applications		Programme: BCA- CTIS		
Year : Second Year		Semester - II		
Course: Employability Skills		Course Code: XCT406		
	L	T	P	C
	2	--	--	--
Theory: 2 Hrs/Week			Max. University Theory Examination:--	
Max. Time for Theory Exam.:3 Hrs			Continuous Internal Assessment:--	

Objectives	
1	To be qualified for employment and to work in a corporate sector demands not only the technical knowledge and experience but interpersonal skills like speaking skills, professional etiquettes and so on.
2	In this course, students will be taught how to develop these skills and apply them in our everyday interactions with people, both in our personal and professional lives.

Unit Number	Details	Hours
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1	<ul style="list-style-type: none">• Speaking skills <ol style="list-style-type: none">1. Group Discussions; Importance of Group Discussions; Difference between Group Discussion, Panel Discussion and Debate;2. Format of GD as used in national level recruitment boards, Rules, ambience and normal practices,3. Dos and Don'ts in Group Discussions, Traits Evaluated in GDs	8
2	<ul style="list-style-type: none">• Etiquette and Mannerism <ol style="list-style-type: none">1. Introduction; Professional etiquette – Etiquette at meetings, Dining, Involuntary Awkward Actions;2. Technology Etiquette – Phone, Email, Social Media, Video Conferencing, Web interview	8
3	<ul style="list-style-type: none">• Professional Presentations <ol style="list-style-type: none">1. Nature of Oral Presentation;2. Planning a Presentation,3. Preparing the Presentation;4. Delivering the Presentation	8
4	<ul style="list-style-type: none">• Resume & Job Application <ol style="list-style-type: none">1. Introduction; What is a Resume;2. What is a Curriculum Vitae; What is a scannable resume;3. How to develop an impressive resume; Different formats of Resume;4. Job application or cover letter	8



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5	<ul style="list-style-type: none"> • Job Interviews 1. Definition of interview; Background information; 2. Types of interviews; Preparatory steps for Job interviews; 3. Interview Skill tips; Changes in the interview process, 4. Frequently asked questions during interviews. 	8
Total Hours		40

Resources	
Recommended Books	1. Objective English: 3 rd Edition, Edgar Thorpe and Showick Thorpe, Pearson Publishers, 2010 print.
Reference Books	2. Presentation skills. The essential guide for students, Patsy Mc Carthy & Caroline Hatcher, Sage publications, 2002.
	3. Soft Skills – An integrated approach to Maximise Personality, Gajendra Singh Chauhan & Sangeeta Sharma, Wiley Publication



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