



DEPARTMENT OF COMPUTER STUDIES

SYLLABUS

CERTIFICATE COURSE FOR UG STUDENTS

YEAR 2020-21

NJCBCA/CP08/2020-21: Network Training (30 Hours)

Course Outcomes

After studying the course, the students shall be able to;

CO1: Familiar with the basic concepts of network system.

CO2: Understand the basics Routing Protocols.

Module I: Basics of Network (8 Hours)

Network basic idea internet, LAN, WAN, MAN, PAN - lab explanation, network topology, client-server communication, peer-to-peer communication, basic LAN commands (PING, IPCONFIG, NSLOOKUP, TRACERT) explanation, IP address (class a, b, c), Network-id, Broadcast-id, self ping (loopback) connectivity, basic LAN configuration, Cable connectivity, WAN network (lab with explanation)

Module II: Routing (4 Hours)

Router explanation, Router commands- Configuration, ip configuration, LAN, WAN Connectivity and IP Connectivity. Routing - Basic idea, Types of routing- static, default, dynamic, static routing-with lab explanation, default routing (internet with DNS server).

Module III: Protocols (10 Hours)

RIP- Routing Information Protocol((lab), OSPF-Open Shortest Path First, OSPF-idea, connectivity, Configuration, router id(lab explanation), EIGRP- Protocol, lab- process of EIGRP, configuration, DHCP-Dynamic Host Configuration Protocol, Configuration, DORA Process, HSRP- Protocol, lab explanation, Configuration.

Module IV: Protocols Cont. (8 Hours)

NAT -network address translation, ACL, with lab explanation, configuration, VLAN-theory, lab, Trunking, VTP protocol, Ether-Channel, Spanning Tree Protocol (lab explanation), T-Shoot commands with explanation.

References

1. An Introduction to Computer Networks - Second Edition, Peter Lars Dorda.
2. Computer Networking: A Top-Down Approach (6th edition), James Kurose and Keith Ross.
3. Routing TCP/IP –Volume II (2nd edition), Jeff Doyle.

Criteria for Getting the Certificate

1. This course is compulsory for all third year undergraduate students of Computer Studies department in the college.
2. Students shall have at least 75% attendance to complete the course.
3. The course is framed to be of 30 hour duration.
4. The total score of the course will be 50. An objective type of examination will be conducted at the end of the examination and the total score will be 50.
5. The students shall attend and pass the exam, which will be completed at the end of the course, with at least 40% marks.
6. Grading Pattern.

MARKS IN PERCENTAGE	GRADE	INTERPRETATION
90 and above	A+	Outstanding
80-89	A	Excellent
70-79	B	Very Good
60-69	C	Good
50-59	D	Satisfactory
40-49	E	Pass/Adequate