



Bharati College
(University of Delhi)
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Lesson Plan (GE, Semester IV, JULY to DEC 2022)

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|------------------------|-------------------|----------------------|------------------|
| Name of Teacher | Dr Vinesh Kumar | Department | Computer Science |
| Course | B.A (H) GE | Semester | III |
| Paper | Computer Networks | Academic Year | 2022-2023 |

Learning Objectives

The course aims to introduce the basics of communication modal and also provide the network design-specific tools.

Learning Outcomes

On successful completion of this course, a student will be able to:

1. State the use of computer networks and different network topologies.
2. Distinguish between LAN, MAN, WAN, and between Intranet, Extranet and Internet.
3. Compare OSI and TCP/IP architectures
4. Enumerate different transmission media and describe the use of each of them.
5. Design web pages using HTML..

Lesson Plan

| Week No. | Theme/Curriculum | Any Additional Information |
|-----------------|---|-----------------------------------|
| 1-2 | Introduction to computer network, data communication, components of data communication, Data transmission mode, data communication measurement, LAN, MAN, WAN, wireless LAN, internet, intranet, extranet | |
| 3 | Network Models: Client/ server network and Peer-to-peer network | |
| 4-5 | OSI Model, TCP/IP, layers and functionalities. | |

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| 6-7 | Transmission Media: Guided Media: Twisted pair, Coaxial cable, Optical fiber, Unguided media: Microwave, Radio frequency propagation, Satellite | |
| 8. | LAN Topologies: Ring, bus, star, mesh and tree topologies. | |
| 9 | Network Devices: NIC, repeaters, hub, bridge, switch, gateway and router. | |
| 10 | Internet Terms: Web page, Home page, website, internet browsers, URL, Hypertext, ISP, Web server, download and upload, online and offline | |
| 11 | Introduction to Web Design: Introduction to hypertext markup language (html) Document type definition, creating web pages, lists, | |
| 12 | Hyperlinks, tables, web forms | |
| 13 | Inserting images, Frames, hosting options and domain name registration | |
| 14. | Customized Features: Cascading style sheet (css) for text formatting and other manipulations | |
| 15. | Cascading style sheet (css) and other manipulations | |

References

1. Forouzan, B.A. (2017). Data Communication and Networking, McGraw-Hill Education.
2. Powell, T.A. (2010).HTML & CSS: The Complete Reference. 5th edition. Tata McGraw-Hill.

Additional Resources

1. Minnick, J. (2015). Web Design with HTML5 and CSS3. 8th edition. Cengage Learning.
2. Stallings, W. (2017), Data and Computer Communications. 10th edition. Pearson Education India.
3. Tanenbaum, A.S. & Wethrall, D. J.(2012).Computer Networks, Pearson Education.