

| Subject Code | Subject Name                 | Credits |
|--------------|------------------------------|---------|
| 26CS154      | Computer Networks Laboratory | 02      |

The course equips students with practical skills in configuring and managing LANs, using networking commands, and implementing network applications through sockets and protocol simulations. It also enables them to analyze and evaluate network performance and device behavior using simulation tools for optimized network design.

| Sl. No. | List of Experiments                                                                                   |
|---------|-------------------------------------------------------------------------------------------------------|
| 1       | Familiarization with configuring and installing a LAN                                                 |
| 2       | Learn to use basic networking commands like ipconfig, ping, arp, rarp, TCPCDump, Netstat, Trace route |
| 3       | Simple Chat Program using TCP Sockets                                                                 |
| 4       | Simulation of HTTP Protocol using TCP Sockets                                                         |
| 5       | Simulation of Sliding Window Protocol using TCP Sockets                                               |
| 6       | Simulation of DNS using UDP Sockets                                                                   |
| 7       | Simulation of Ping using Raw Sockets                                                                  |
| 8       | Learn to use commands like Develop applications and understand the behavior of TCP Options            |
| 9       | Study of TCP/UDP performance using OPNET tool                                                         |
| 10      | Performance comparison of MAC protocols using OPNET tool                                              |
| 11      | Performance comparison of Routing protocols using OPNET tool                                          |
| 12      | Study and configure functionalities of a router and switches (or by simulation)                       |

**Note:** Students are required to perform and record the experiments in the laboratory manual as part of the course requirements.