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| **Section Course Detail** | |
| **Semester** | FALL 2024 |
| **Department** | Computer Science (KSK) |
| **Section** | A |
| **Subject Title** | CSC-203L Computer Networks |
| **Subject Domain** | Engineering |
| **Subject Knowledge** | Computing |
| **Contact** |  |

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| **Measureable Student Learning Outcomes** | | | | | |
| **CLOs** | **Description** | **PLOs** | **Domain** | **Domain Level** | **Assessments** |
| CLO1 | Demonstrate the Internet traffic using modern sniffer tools. | PLO04 | Cognitive | 2. Understand | null |
| CLO2 | Comprehend the Internet core functions using diverse online available tools. | PLO04 | Cognitive | 2. Understand | null |
| CLO3 | Execute simulations to measure the network parameters. | PLO03 | Cognitive | 3. Apply | Null |
| CLO4 | Implement the campus/corporate example network scenarios along with hands on training on network devices like switches. | PLO06 | Cognitive | 3. Apply | null |
| **Class Timings** | | | | | |
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| **Section Content** | | |
| **Week (Lec)** | **Topics** | **CLO's** |
| week1 | Introduction to Lab contents and  Introduction to Cisco Packet Tracer  Different network connections and simulations (PC to PC, Hub, and Switch) PC Configurations (IP and default subnet mask) | CLO3 |

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| **Week (Lec)** | **Topics** | **CLO's** |
| Week 2 | Concept of LAN and WAN  Different network topologies using hub, switches, and router (with default configurations) and simulations (unicasting and broadcasting)  Topologies covered: Bus, Star, Ring, Mesh | CLO3 |
| Week 3 | Introduction to Wireshark  Packet Capturing and Analyzing real time HTTP traffic  proxy server, Web Server | CLO1 |
| Week 4 | Socket Programming (TCP)  Daytime Client  Echo Server  Home task from reference book (Mail Client, Proxy Server) | CLO2 |
| Week 5 | Socket Programming (UDP)  Daytime Client  Echo Server  Chat Application (Project) | CLO2 |
| Week 6 | Wireshark UDP (DNS) Packet Analysis +torrent+ TCP Congestion Control+ quiz | CLO1 |
| Week 7 | Networking diagnostic tools with various networking commands through command prompt (remote login on Packet tracer) | CLO2 |
| Week 8 | DHCP, FTP, Web Server, HTTP Server (Application Layer Protocols) using Cisco Packet Tracer | CLO3 |
| Week 10 | Configuration of Switch and Routers through CLI remote login and telnet session  Project Network Design\* | CLO2, CLO4 |
| Week 11 | IPv4 addressing, subnetting | CLO3 |
| Week 12 | Classless addressing IPv4 Subnetting (VLSM) with simple network topology on packet tracer | CLO3 |
| Week 13 | Router Configuration (Static, RIP, OSPF) | CLO2 |
| Week 14 | Virtual LANs (VLANs) | CLO2 |
| Week 15 | Lab Evaluation |  |