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| 1. | Title of the course | Computer Networks Laboratory |
| 2. | Course number | CS312P |
| 3. | Structure of credits (L-T-P-C) | 0-0-3-2 |
| 4. | New course/modification to | Modified with CS306P/COMPUTER NETWORKS LABORATORY |
| 5. | To be offered by | Computer Science and Engineering |
| 6. | Proposed by | V Mahendran |
| 7. | Prerequisite | None |
| 8. | Course Objective(s): To design key network protocol layers and analyse the performance of different wired and wireless networks. | |
| 9. | Course Content: Network programming and protocol design: Implementing key network layers including socket programming and designing of various network protocol layers; Network design: designing and configuring network functionalities and services such as virtual local area network, local area network, routing, internet protocol segmentation, implementing network services; Network performance analysis: using packet capturing tools such as wireshark and tcpdump to study the working of network protocols and analyse the performance of both wired and wireless networks using simulation environments such as network simulator-3. | |
| 10. | Textbook(s): 1. Stevens R, Fenner B and Rudoff A, Unix Network Programming - Vol I, Pearson (2015). 2. Chappel L, Troubleshooting with Wireshark, Wireshark Solutions Series Book (2014). | |
| 11. | Reference(s): 1. Kurose J and Keith Ross, Computer Networking: A Top Down Approach, Pearson (2016). 2. Bertsekas D and Gallager R, Data Networks, Pearson (2015). | |