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| Title | Data Communication and Computer Networks |
| Code | CMP-330 |
| Credit Hours | 3 |
| Category | Computing |
| Prerequisite | None |
| Co-Requisite | None |
| Follow-up | None |
| Course Description | Reference models: ISO/OSI and TCP/IP, introduction and protocols architecture, basic concepts of networking, network topologies, layered architecture, physical layer functionality, modulation techniques, multiplexing in time and frequency domain, digital data to digital signal encoding schemes. transmission errors, maximum data transfer rate of noiseless and noisy channels, electromagnetic spectrum, industrial-scientific band (ISM), frequency hopping spread spectrum (FHSS), data link layer functionality, multiple access techniques, circuit switching and packet switching, LAN technologies, wireless networks, MAC addressing, networking devices, network layer protocols, IPv4 and IPv6, IP addressing, sub netting, CIDR, routing protocols, transport layer protocols, ports and sockets, connection establishment, flow and congestion control, application layer protocols, latest trends in computer networks. |
| Text Book(s) | James F. Kurose and Keith W. Ross, Computer Networking: A Top-Down Approach Featuring the Internet, 6th edition, ISBN-10: 0132856204 |
| Reference Material | <ol style="list-style-type: none"> 1. Andrew S. Tanenbaum, David J. Wetherall ,Computer Networks, 5th Edition, Pearson, 2102. ISBN 10: 0132126958 2. William Stallings, Data and Computer Communications, 10th Edition, Pearson, 2013. ISBN-13: 978-0133506488ISBN-10: 0133506487 3. Behrouz A. Forouzan, Data Communication and Computer Networks, 5th Edition, Science Engineering & Math, 2012. ISBN-13: 978-0073376226 |