

Course Code	CSE233		
Course Name	Network Administration		
Credits	2		
Course Offered to	UG		
Course Description	This course is intended for second year B.Tech students, who wish to improve skills through hands-on experience in network administration. This course is a follow up of the course on System Administration. Students, who successfully complete these courses, will be offered part-time work for System and Network Admin in the institute and will be expected to work for at least two semesters.		
Pre-requisites			
Pre-requisite (Mandatory)	Pre-requisite (Desirable)	Pre-requisite(other)	
		CSE230	
*Please insert more rows if required			
Post Conditions*(For suggestions on verbs please refer the second sheet)			
CO1	CO2	CO3	CO4
Students are able to read design document of enterprise-level network	Students can do basic setup of switches and APs for an enterprise	Students can understand IP addressing	
Weekly Lecture Plan			
Week Number	Lecture Topic	COs Met	Assignment/Labs/Tutorial
1	Introduction to Computer Networks: OSI & TCP/IP Model		
2	Physical Media: UTP, Fiber and Wireless Media	CO1	Assignment (8 hours)
3	LAN Architecture: 10/100/1000/10G Ethernet		
4	Switching & Routing: Layer 2 & Layer 3 switching; Routing; VLAN; Cisco L2 and L3 Switch Configuration		Assignment (8 hours)
5	IP Addressing: IPv4 Addressing and Sub-netting; DHCP Configuration; IPv6	CO3	
6	Wireless LAN: 802.11 a/b/g/n/ac WiFi; Access Point and Wireless Router configuration		Assignment (8 hours)
7	Internet Architecture: ISP Architecture; DNS Resolution; BGP Routing; Content Mirroring		
8	Internet Applications: DNS; Web; Mail; Proxy; NTP		Assignment (8 hours)
9	Perimeter Security: Firewall; UTM		
10	Network Security: LAN and WLAN Security issues; IP Spoofing; Dictionary Attack; DoS and DDoS Attack; Rogue/Misconfigured/External APs	CO2	Assignment (8 hours)
11	Network Troubleshooting: ping, traceroute, nslookup, dig, tcpdump		
12	Network Monitoring: SNMP; MRTG		Assignment (8 hours)
13	Project discussions		
*Please insert more rows if required			
Weekly Lab Plan			
Week Number	Laboratory Exercise	COs Met	Platform (Hardware/Software)
*Please insert more rows if required			
Assessment Plan			
Type of Evaluation	% Contribution in Grade		
Assignment	30		
Mid-sem	15		
End-sem	15		
Project	40		
*Please insert more row for other type of Evaluation			
Resource Material			
Type	Title		
Textbook			