Course Code: EITS - 105		
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Course Title: Computer Networking- I		
Number of Credits: 03	**Total Hours: 42**	**Total Marks: 75**

Prerequisites for the course

Fundaments of computer, Computer basics

Objectives of Course

1. To understand basic concepts about internet
2. To understand switching in networking
3. To know the history of networking
4. To understand data communication

Course Content

Unit I	Internet	4 Hours
Overview, Protocol, Network edge		
Unit II	Network Core	10 Hours
Packet switching, Circuit Switching, Network of Networks, Overview of delay in Packet switched networks, Queuing delay and packet loss, End to end delay, Throughput in computer networks.		
Unit III	Protocol Layers and their service models	8 Hours
Layered Architecture, Encapsulation, Networks under attack		
Unit IV	History of Computer Networking and Internet	10 Hours
Development of packet switching, Proprietary networks and Internetworking, Proliferation of Networks, The Internet Explosion: The 1990s, The New Millennium		
Unit V	Data Communication	10 Hours
Introduction to Data Communication, Analog and Digital Signals, Simplex, Half- Duplex and Full-Duplex transmission mode.		

Pedagogy

Lectures/Tutorial/Assignments

Course Outcome

On completion of the course, students will be able to:
1. Understand basic concepts about internet and protocols
2. Understand switching in networking
3. Know the history of networking
4. Understand data communication

References/Readings

1. Bell, C. G., Habermann, A. N., McCredie, J., Rutledge, R., & Wulf, W. (1970). Computer networks. In *Computer* (Vol. 3, Issue 5).
2. Tanenbaum, A. S., & Wetherall, D. J. (2005). Computer Networks. In Computers, Software Engineering, And Digital Devices. https://Doi.Org/10.4337/9781784711603.00023
3. D-Link Certified, DCS Switching Training Guide
4. D-Link Certified, DCS Switching Lab Manual
5. Cisco Certified Network Associate Training Guide
6. James F. Kurose, Keith W. Ross, Computer Networking A Top down Approach, 7th Edition, Pearson, 2001.
7. Data communications and Networking, Behrouz A Forouzan, Tata Mc Graw-Hill 5th edition, 2013
8. Larry Peterson and Bruce S Davis "Computer Networks :A System Approach" 5 [th]Edition , Elsevier -2014
9. Douglas E Comer, " Internetworking with TCP/IP, Principles, Protocols and Architecture" 6th Edition, PHI - 2014
10. An Engineering Approach to Computer Networks-S. Keshav, 2nd Edition, Pearson Education
11. Data Communications and Networking – Behrouz A. Forouzan. Third Edition TMH.