

MSIT Second Year Syllabus
COMPUTER NETWORKS & INFORMATION SECURITY
SPECIALIZATION

Mini Semester III:

Advanced Networking Concepts

Course ID : CN2343

Duration : 4 Weeks

Credits : 4

DESCRIPTION:

This course aimed to provide conceptual view for underlying technologies in networking domain. Syllabus for this four week course includes study, discussion and understanding of following concepts: End to end development of application level project, includes communicating to internet web servers using client programs that use socket API (involves handling concurrency with multiple client processes, and multiple web servers). Understanding importance of ICMP, and generating ICMP messages using raw sockets, also involves development of PING program that uses ICMP packets. Understanding how Linux kernel interfaces with networking devices, how is networking programmed onto Linux kernel. How to include networking modules into a Linux kernel by recompiling kernel modules. This course also introduce students to bridging and layer 2 communications include study about spanning tree protocol, understanding of rapid spanning trees and multiple spanning trees. Finally this course touches on layer 3 communication including BGP, OSPF, and Linux specific routing material like routing sockets, routing commands, a router architecture and requirements of a router.