CMPT 471 - D100 Networking II

Instructor(s): Qianping Gu

Calendar Objective/Description:
This course covers the fundamentals of higher level network functionality such as remote procedure/object calls, name/address resolution, network file systems, network security and high speed connectivity/bridging/switching.

Instructor's Objectives:
Covers in depth the operating protocols which surround TCP/IP in the Internet protocol suite, in a Linux operating system environment. Assignments and lab work will be related to the operation and administration of a network using Internet protocols.

Prerequisites:
CMPT 300 and 371.

Topics:
- Overview of Linux O/S
- Internet basics, underlying network technologies, IP, ICMP, UDP, TCP
- Address/name resolution, ARP, DHCP, NDP, DNS
- Creating route for packet delivery, RIP, OSPF, BGP, IP switching, MPLS, SDN
- Multicasting, IGMP
- Network virtualization, VPN, NAT, overlay networks
- Network security technologies, secret-key/public-key encryptions, digital signature, firewall
- Internet security, PGP, SSL, IPsec, LAN security

Grading:
Assignments 25%, midterm 25%, final 50% (tentative).
Students must attain an overall passing grade on the weighted average of exams in the course in order to obtain a clear pass (C- or better).

Required Books:

Academic Honesty Statement::
Academic honesty plays a key role in our efforts to maintain a high standard of academic excellence and integrity. Students are advised that ALL acts of intellectual dishonesty will be handled in accordance with the SFU Academic Honesty and Student Conduct Policies ( http://www.sfu.ca/policies/gazette/student.html ).