Computing Science Course Outlines 2017 Fall

CMPT 371 - D100 Data Communications and Networking

Instructor(s): Jiangchuan Liu

Calendar Objective/Description:
Data communication fundamentals (data types, rates, and transmission media). Network architectures for local and wide areas. Communications protocols suitable for various architectures. ISO protocols and internetworking. Performance analysis under various loadings and channel error rates.

Instructor’s Objectives:
This course explores the development and design of data communication networks and protocols. In particular, we will focus on the Internet and its applications.

Prerequisites:
CMPT 225, (CMPT 150, ENSC 150 or CMPT 295) and MATH 151 (MATH 150). MATH 154 or 157 with a grade of at least B+ may be substituted for MATH 151 (MATH 150).

Topics:
- Introduction: basic principles and architecture, TCP/IP reference model.
- Application layer protocols.
- Transport Protocols: TCP, UDP.
- Network Layer: routing protocols and IP.
- Data Link Control, Local Area Networks.

Grading:
Assignments and Projects 20%; midterms 35%; final 45% (tentative).

Required Books:

Reference 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).