Computing Science Course Outlines 2022 Fall

CMPT 371 - D100 Data Communications/Networking

Instructor(s): Ouldooz Baghban Karimi

Calendar Objective/Description:
Data Communications/Networking

Instructor's Objectives:
Communication networks play a central role in our everyday connected life. This course is an introduction to the basic concepts, principles, and technologies for understanding communication networks. The course will cover the preliminaries of networks and the Internet, and will provide students the foundation to further study networks.

Students must have access to a computer with stable internet connection. Some components of the course require real-time participation during the scheduled lecture and/or exam times.

Prerequisites:
see go.sfu.ca

Topics:
- Introduction to Networks: Basic Principles, Architecture, and Reference Models
- Application Layer: Principles, HTTP, MAIL, DNS, P2P, Multimedia, CDN
- Transport Layer: Reliable Transport, Connection, Congestion, TCP & UDP
- Network Layer: Data Plane, Control Plane, IP, Forwarding, Routing, SDN
- Data Link Layer: Concepts, Media Access, LANs
- Advanced Topics

Grading:
Assignments & Mini Project (30%) Quizzes & Interactive Sessions (15%) Midterm (20%) Final (35%)
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:

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).