

ECE 610: Broadband Communication Networks

Syllabus for Winter 2015

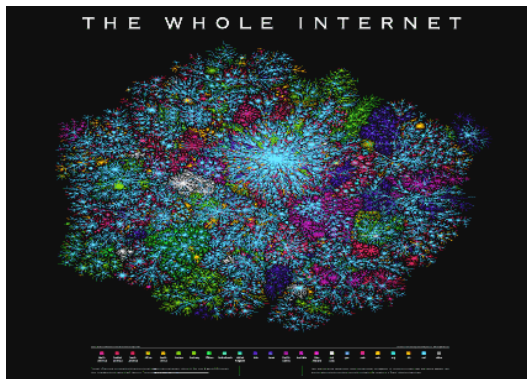
Instructor: Prof. Catherine Rosenberg
EIT 3139, tel: 84510, email: cath@uwaterloo.ca

Lecture Schedule: Wednesday 11:30am to 2:20pm in EIT 3151 (two extra classes have been scheduled on Tuesday Feb. 3 and March 24 from 5:30pm to 8:20pm)

Course website: All course announcements and materials will be included on LEARN.

Office hours: I'm available for questions and discussion after most lectures, but I'm also happy to meet with you any other time (set up an appointment by seeing me after class or by sending an email).

Pre-requisite: Undergraduate probability.



High level description: This is an introductory graduate course on the fundamental design and implementation concepts of computer communication networks, their protocols, and applications. Topics to be covered include: overview of network architectures, data link protocols, local area networks (wired and wireless), addressing, routing, congestion control, and finally transport and applications protocols. Examples will be drawn primarily from the Internet.

Course Outline

- Introduction to computer communication networks
- Performance and Quality of Service
- Link layer and Local Area Networks (ARP, Ethernet, WiFi, etc.)
- Network layer: IPv4, IPv6, ICMP, addressing, routing, etc.
- Transport layer: UDP, TCP
- Application layer: HTTP, FTP, DNS, etc.