ELEC514 – Design and Analysis of Computer Networks
Term – FALL 2016 (201609)

Instructor

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Office Hours

Days: M/Th (or by appointment)
Time: 1:00pm-2:30pm
Location: EOW317

Course Objectives

− The goal of the course is to introduce the fundamental concepts, mathematical tools and techniques related to network performance study, and how to apply them to solve practical problems in computer communication networks.

Learning Outcomes

− Understand fundamental probability theory, random process, finite-state Markov chains, queueing theory, and analyze network performance using the math tools taught.

Syllabus

− Probability, random variables and distributions. Random number generation. Transient and steady-state analysis of Markov chains. Queuing theory and networks of queues. Performance analysis of Local Area Networks (LAN) and Wireless Local Area Networks (WLANs). Telecommunications traffic modeling. Markov modulated and self-similar traffic. Interconnection networks and their modeling.

A-Section(s): A01 / CRN 11290; A02 / CRN 11291
Days: M/Th
Time: 11:30am - 12:50pm
Location: ECS124

Optional Text

Title: Analysis of Computer and Communication Networks
Author: Gebali, Fayez
Publisher: Springer
Year: 2008

Assessment:

Assignments:	10%	Due Dates: Oct. 6, Oct. 20, Nov. 14, Dec. 1
Presentation:	10%	
Mid-term:	20%	Date: Oct. 24
Project:	30%	
Final:	30%	

Assignment of E grade and supplemental examination for this course will be at the discretion of the Course Instructor. The rules for supplemental examinations can be found in the current Undergraduate Calendar. http://web.uvic.ca/calendar/FACS/UnIn/UARe/Grad.html

Note:

The final grade obtained from the above marking scheme for the purpose of GPA calculation will be based on the percentage-to-grade point conversion table as listed in the current Graduate Calendar.

http://web.uvic.ca/calendar2016-09/grad/academic-regulations/grading.html

Note to Students:

Students who have issues with the conduct of the course should discuss them with the instructor first. If these discussions do not resolve the issue, then students should feel free to contact the Chair of the Department by email or the Chair's Secretary to set up an appointment.

Accommodation of Religious Observance
http://web.uvic.ca/calendar2016-09/general/policies.html

Policy on Inclusivity and Diversity
http://web.uvic.ca/calendar2016-09/general/policies.html

Standards of Professional Behaviour

You are advised to read the Faculty of Engineering document Standards for Professional Behaviour, which contains important information regarding conduct in courses, labs, and in the general use of facilities.

http://www.uvic.ca/engineering/assets/docs/professional-behaviour.pdf

Cheating, plagiarism and other forms of academic fraud are taken very seriously by both the University and the Department. You should consult the entry in the current Graduate Calendar for the UVic policy on academic integrity.

http://web.uvic.ca/calendar2016-09/undergrad/info/regulations/academic-integrity.html

Course Lecture Notes

Unless otherwise noted, all course materials supplied to students in this course have been prepared by the instructor and are intended for use in this course only. These materials are NOT to be re-circulated digitally, whether by email or by uploading or copying to websites, or to others not enrolled in this course. Violation of this policy may in some cases constitute a breach of academic integrity as defined in the UVic Calendar.