



UVic

Department of Electrical and Computer Engineering

COURSE OUTLINE

ELEC 519B BROADBAND AND WIRELESS NETWORKS

Fall 2012

Instructor:

Dr. Lin Cai
Phone: 721-8691
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Office Hours:

Days: TF or by appointment
Time: 10:30 am -12:00 pm
Location: EOW317

Lectures:

A-Section(s): A01, CRN13464
Days: TW
Time: 13:30-14:50
Location: ECS130

Optional Text:

Title: Multimedia Services in Wireless Internet: Modeling and Analysis
Author: L. Cai, X. Shen, and J. W. Mark
Publisher: John Wiley & Sons, Inc.,
Year: 2009

Assessment:

Assignments:	20%
Project:	30%
Presentation:	10%
Final	40%

Note: Failure to complete all laboratory requirements will result in a grade of N being awarded for the course.

Due dates for assignments: Sept. 25, Oct. 16, Oct. 30, Nov. 20

The final grade obtained from the above marking scheme will be based on the following percentage-to-grade point conversion:

Passing Grades	Grade Point Value	Percentage For Instructor Use Only	
A+	9	90 - 100	
A	8	85 - 89	
A-	7	80 - 84	
B+	6	77 - 79	
B	5	73 - 76	
B-	4	70 - 72	
C+	3	65 - 69	
C	2	60 - 64	
D	1	50 - 59	
Failing Grades	Grade Point Value	Percentage For Instructor Use Only	Notes
E	0	35 - 49	Fail, conditional supplemental exam.
F	0	0 - 34	Fail, no supplemental exam.
N	0	0 - 49	Did not write examination, Lab or otherwise complete course requirements by the end of the term or session; no supplemental exam.

The rules for supplemental examinations are found on page 81 of the current 2012/13 Undergraduate Calendar.

Term in which E Grade Was Obtained	Application Deadline for Supplemental Exam	Supplemental Exam Date
First term of Winter Session (Sept – Dec)	February 28 in the following term	First week of following May
Second term of Winter Session (Jan – Apr)	June 30 in the following term	First week of following September
Summer Session (May – Aug)	October 31 in the following term	First week of following January

Deferred exams will normally be written at the start of the student's next academic term; i.e., approximately 4 months following the deferral of the exam.

Course Description

1. Course Objectives

This course focuses on resource management and protocol design for transporting data and multimedia traffic in broadband and wireless communication networks. Topics include multimedia traffic modeling, wireless channel modeling, radio resource management, mobility management, and end-to-end flow and congestion control. The goal of the course is to introduce the fundamental concepts, tools and methodologies in broadband and wireless networks, and how to apply them to solve practical and emerging problems. Students are encouraged to investigate novel ideas in the area via course projects.

2. Learning Outcomes

Understand and apply queueing theory, multimedia traffic modeling, wireless channel modeling, radio resource management and congestion-control to investigate network performance and optimize network resource management and control.

3. Syllabus

Queueing theory, wireless channel modeling, multimedia traffic modeling, call admission control, access control, TCP congestion control

Accommodation of Religious Observance

See <http://web.uvic.ca/calendar2012/GI/GUPo.html>

Policy on Inclusivity and Diversity

See <http://web.uvic.ca/calendar2012/GI/GUPo.html>

Standards of Professional Behaviour

You are advised to read the Faculty of Engineering document Standards for Professional Behaviour at <http://www.engr.uvic.ca/policy/professional-behaviour.php> which contains important information regarding conduct in courses, labs, and in the general use of facilities.

Cheating, plagiarism and other forms of academic fraud are taken very seriously by both the University and the Department. You should consult

<http://web.uvic.ca/calendar2012/FACS/UnIn/UARe/PoAcI.html> for the UVic policy on academic integrity.