Course Outline
Carleton University School of Computer Science
COMP 5402 - Protocols for Mobile and Wireless Networks
Winter 2015

Class Schedule

Classroom: Paterson Hall 133
Class Times: 11:35 am - 12:55 pm MW
Course Website: http://people.scs.carleton.ca/~barbeau/Courses/2015/5402/

Course Description

Link and network layer protocols of wireless networks; applications of wireless networks may be discussed. Topics may include: protocol implementation, mobile IP, resource discovery, wireless LANs/PANs, and spread spectrum.

Topics Covered

Week	Dates	Topics
1 & 2	Jan. 5, 7, 12 & 14	Wireless communications
3 & 4	Jan. 19, 21, 26 & 28	Wireless technology & link
5 & 6	Feb. 2, 4, 9, & 11	Mobililty support
Winter Break		
7	Feb. 23 & 25	Presentation 1
8	Mar. 2 & 4	Software defined radio Guest: Richard Brisson - Cryptology History (Mar. 4)
9	Mar. 9 & 11	Cognitive radio network
10	Mar. 16 & 18	Acoustic underwater sensor networks
11 & 12	Mar. 23, 25 & 30	Quantum wireless networking
12 & 13	Apr. 1 & 6	Presentation 2

Prerequisites

COMP 3203 or SYSC 4602.

Course Objectives

At the end of this course, you will:

- Understand key physical principles enabling or impairing wireless communications.
- Know rules and conventions; placed at the physical, link and network layers; used to communicate securely in a wireless and mobile environment.
- Understand and be able analyze key mechanisms used by current wireless technologies.
- Know emerging concepts in the field of wireless and mobile networks.
- Know resources presenting recent research results in the field of wireless and mobile communications.
- Be able to identify gaps in past research works and open issues in the field of wireless and mobile communications.
- Be able to develop and demonstrate; e.g., through an analytical model and a simulation; a solution to an open research problem in the field wireless and mobile communications.
- Know how to present, both orally and on paper, a solution to a wireless and mobile communication open research problem.

Textbook

Text will be available on the course web page.

Evaluation

Component	Weight	Due Date
Exercises	30	TBD
Presentation 1	10	Feb. 23 & 25
Presentation 2	10	Apr. 1 & 6
Research paper	50	Apr. 8

Attendance

Class attendance is very important, as students will be responsible for all items discussed in class.

University Policies

Student Academic Integrity Policy

Every student should be familiar with the Carleton University student academic integrity policy. A student found in violation of academic integrity standards may be awarded penalties which range from a reprimand to receiving a grade of F in the course or even being expelled from the program or University. Some examples of offences are: plagiarism and unauthorized co-operation or collaboration. Information on this policy may be found in the Undergraduate Calendar.

Plagiarism

As defined by Senate, "plagiarism is presenting, whether intentional or not, the ideas, expression of ideas or work of others as one's own". Reported offences will be reviewed by the office of the Dean of Science.

Unauthorized Co-operation or Collaboration

Senate policy states that "to ensure fairness and equity in assessment of term work, students shall not co-operate or collaborate in the completion of an academic assignment, in whole or in part, when the instructor has indicated that the assignment is to be completed on an individual basis". Please refer to the course outline statement or the instructor concerning this issue.

Academic Accommodations for Students with Disabilities

The Paul Menton Centre for Students with Disabilities (PMC) provides services to students with Learning Disabilities (LD), psychiatric/mental health disabilities, Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorders (ASD), chronic medical conditions, and impairments in mobility, hearing, and vision. If you have a disability requiring academic accommodations in this course, please contact PMC at 613-520-6608 or pmc@carleton.ca for a formal evaluation. If you are already registered with the PMC, contact your PMC coordinator to send me your Letter of Accommodation at the beginning of the term, and no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with me to ensure accommodation arrangements are made. Please consult the PMC website for the deadline to request accommodations for the formally-scheduled exam (if applicable) at http://www2.carleton.ca/pmc/new-and-current-students/dates-and-deadlines

Religious Obligation

Write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to

exist. For more details visit the Equity Services website: http://www2.carleton.ca/equity/

Pregnancy Obligation

Write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details visit the Equity Services website: http://www2.carleton.ca/equity/

Medical Certificate

The following is a link to the official medical certificate accepted by Carleton University for the deferral of final examinations or assignments in undergraduate courses. To access the form, please go to http://www.carleton.ca/registrar/forms