ECE 568
Computer Security

Winter 2016
Course Syllabus

General Information

Welcome to ECE 568!

This course covers principles of computer systems security. It starts by examining how to identify security vulnerabilities, how they can be exploited, and then discusses techniques that can help defend against such attacks. The course then provides an introduction to basic elements of cryptography, and continues by covering topics in operating system security, network security and web security.

Topics include: Introduction to Computer Security, Sofware Vulnerabilities and Attacks, Introduction to Cryptography, Authentication, OS Security, Web Security, Network Security, Security Policies and Security Evaluation.

Instructor

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Course Website

Information on ECE568, including important announcements and course marks can be found on the UofT Portal course website (https://portal.utoronto.ca/). Please visit the website on a regular basis for up-to-date information, including information about labs, assignments and lectures. The website also provides a discussion forum, where you can post questions regarding the course. While we will try to check the board as often as possible, this does not necessarily mean you will get an answer for your questions in less than 24 hours.

e-mail

All UofT students are required to have a valid UTORmail email address. You are responsible for ensuring that your UofT email address (@utoronto.ca) is properly entered in the ROSI system. Forwarding your UofT email to Gmail, Yahoo, etc. is not advisable; if you choose to forward your mail, please be cautious that, in some cases, messages from UofT email addresses are filtered by third parties as junk mail – which means that emails from your course instructor may end up in your spam or junk mail folder.

Textbook

There is no required textbook for the course. However, the instructor will provide a list of reference books in class. The instructor will also provide lecture slides on the course web site. Also, various other resources will be available on the web site.

Timetable

The timetable for the course is shown below. You are expected to attend the two lectures (three hours) each week; attendance in the labs is recommended, but not required. Due to space constraints, please attend only the labs session for your officially-designated section, as indicated on your timetable.

Lecture	**Monday**	1:10pm – 3:00pm	SF1105
Lecture	**Wednesday**	2:10pm – 3:00pm	BA1130

Labs

The labs consist of a number of programming exercises that will take a substantial amount of your time. The TAs will test your lab on the ECF lab workstations (p___.ecf.utoronto.ca). You may do the labs on your own machines, but it is your responsibility to make sure that they work on the ECF computers. **PLEASE NOTE** that you should **not** use remote.ecf.utoronto.ca for your labs: it is running an O/S that will respond differently than the O/S on the lab workstations. The TAs will be using automated scripts to aid them in grading the labs: as a result, it is important that you follow the submission instructions for each lab carefully. You are encouraged to include documentation for your labs (not exceeding 1 page, please no essays!). If your labs do not work completely, the TAs may use this documentation to assign part marks. Lab attendance is not required. **Labs will be done in groups of two students.**

Assignments

There will be several assignments in the course. Written assignments should be submitted in class on the day they are due. If you can't make it to class that day, ask a friend to bring it, or bring it in a previous class. Any assignments brought after the class will be considered late. **Assignments are to be written individually.** It is important to be concise in both the lab documentation and the assignments. Quantity does not equal quality! Poor English syntax and/or illegible handwriting will result in mark deductions. Please use a spellchecker and write complete sentences for your answers.

Important Dates

The release date and due dates for the labs and assignments are shown below. A handout for each lab and for each assignment will be available from the course web site, and no hard copies will be provided in class. **Labs are due by no later than 11:59 pm on Friday of the week they are due. Assignments should be handed to the instructor in class the week they are due (either Monday or Wednesday).**

Week 1 – Jan 4-8	Course orientation: no labs.
Week 2 – Jan 11-15	Lab hours start. Lab #1 released.
Week 3 – Jan 18-22	Assignment #1 released.
Week 4 – Jan 25-29	**Lab #1 due.**
Week 5 – Feb 1-5	Lab #2 released.
Week 6 – Feb 8-12	**Assignment #1 due.** Assignment #2 released.
Week 7 – Feb 15-19	*Reading Week: No lectures or labs*
Week 8 – Feb 22-26	**Lab #2 due.**
Week 9 – Feb 29 – Mar 4	Lab #3 released.
Week 10 – Mar 7-11	**Assignment #2 due.** Assignment #3 released.
Week 11 – Mar 14-18	**Lab #3 due.**
Week 12 – Mar 21-25	Lab #4 released.
Week 13 – Mar 28 - Apr 1	**Assignment #3 due.**
Week 14 – Apr 4-8	**Lab #4 due.** Last week: final exam review

Tutorials

There are no tutorials in this course. Please make use of the TAs in the labs, the Portal discussion forum, and office hours with the instructor.

Course Policies

There will be no extensions given in this course. Solutions for all assignments will be posted the day after they are due. Plagiarism (of code or of written material) will not be tolerated; in particular, you and your lab partner are jointly responsible for ensuring that your submitted lab work is original work.

Missed Labs / Assignments

You will have a minimum of two weeks to do any lab or assignments – so a couple of sick days will not be accepted as grounds for special consideration. Assignments can be handed in early, and you can submit labs as many times as you like. Nevertheless, if for some valid reason you are unable to submit the lab on time or hand in an assignment, please provide an explanation and appropriate documentation (for example, a doctor's note).

Re-grading

Everybody makes mistakes, including TAs and the instructor! If you feel that there has been a grading mistake, you can request a regrade **within one week of the assignment or lab results being returned**. You should submit a short note explaining which questions are in error and why you think you deserve a regrade. A TA or the instructor will regrade the entire assignment. (Therefore, you should be sure that there has been a significant mistake, or you may very well end up with a lower grade on your assignment.)

Marking and Evaluation

There will also be one mid-term test during the course. A final exam will be given during the final exam period. The details of the mid-term test and final exam time will be provided in class and on the web site. The composition of the final mark is as follows:

Assignments:	10%
Labs:	15%
Mid-Term Test:	25%
Final Exam:	50%
Calculator Type:	4 (none)
Exam Type:	C (single reference sheet, both sides)