

# CSC 458 Computer Networks (LEC5101&0201) Fall 2018

This is an introductory course on computer networks. Topics covered in this course include packet switching systems, socket programming, network software, hardware, and protocols, network naming and addressing, congestion control schemes, software-defined networking, network security, and wireless networking. The emphasis of the course is network programming and applications.

## Instructor Information

Name	Email	Office Hour Location	Office Hour Time
Sajad Shirali-Shahreza	<a href="mailto:shirali@cs.toronto.edu">shirali@cs.toronto.edu</a> *	TBD	Tuesdays 4-5:30PM
Joe Lim	<a href="mailto:joe.lim@utoronto.ca">joe.lim@utoronto.ca</a> *	TBD	Tuesdays 10-12

\* Please write "CSC458" in the subject header of your emails.

\*\* Email your instructor if appointments outside this time are required.

## Course Information

Information pertaining to this course will be available on Quercus ([q.utoronto.ca](http://q.utoronto.ca)). The course website will have course announcements & materials, a link to discussion boards (Discourse, CS department discussion board), assignments, a link to assignment submission website (MarkUs), and relevant readings. Important announcements will be made through the email registered on Quercus, but we expect you to check the site frequently, because some of the announcements may only be posted on the website and not send through email to keep your inbox less crowded!

## Mark Breakdown

Component	Weight
Problem Sets	16% (2 problem sets, 8% each)
Course Project	14%
Midterm exam	30% (closed-book)
Final exam	40% (also closed-book) → you must get 40% on the final to pass the course

### • Problem Sets:

- The problem sets will be based on the textbook and the material covered in the lectures.
- There will be 2 problems sets and each worth 8% of your total mark.
- Students should submit the answer to problem sets individually.
- Submissions will be done through MarkUs.

### • Course Project:

- This course also includes a course project. The course project is primarily focused on analysis of real-world packet traces. The results of the analysis are then submitted as a project report.
- Students can work on the course project individually or in groups of 2.
- Project reports should also be submitted through MarkUs.

### • Late Policy:

- All submission deadlines will be Sunday night (11:59PM).
- You can submit the assignment after the deadline with a penalty of 0.5% for each hour. For example, if you submit it 10 hours after the deadline, 5% of the mark will be deducted because of the late submission.
- Submissions will not be accepted after two days.

## Important Dates

Week	Dates	Topics	Reading	Important Dates
1	Sept 6 – 16	Course logistics and introduction		
2	Sept 17 – 23	Link layer, error detection/correction	Chapter 1	
3	Sept 24 – 30	Interconnecting LANs; Internet Protocol (IP)	Chapter 2	PS1 Due (Sept 30)
4	Oct 1 – 7	The Internet Protocol; Routing and Forwarding	Chapter 3	
5	Oct 8 – 14	Internet Topology and Routing	Chapter 4	
6	Oct 15 – 21	<b>Midterm</b>		<b>Midterm</b>
7	Oct 22 – 28	Transport Protocol	Chapter 5	
8	Oct 29–Nov 4	Congestion Control	Chapter 6	PS2 Due (Nov 4)
9	Nov 5 – 11	<b>-- Reading Week --</b>		
10	Nov 12 – 18	Queueing Mechanisms; Middleboxes		
11	Nov 19 – 25	Software-Defined Networking		Project Report (Nov 25)
12	Nov 26–Dec 2	Network Security		
13	Dec 3 – 5	Overlay networks and Final Review	Chapter 8	

*\*The midterm will be on Tuesday, October 16, 6:30pm-8:30pm. Please report conflicts to your instructor by September 16.*

Lateness is generally not accepted, except in cases of medical emergency. Lateness due to personal reasons must be brought to the instructor for consideration, as early as possible.

## Course Textbook

Required: Peterson, Davie, *Computer Networks: A Systems Approach*, 5th ed., Morgan Kaufmann, 2011

## Administrative Details

Plagiarism is very bad. Please don't do it. It just makes things unpleasant for everybody involved. In case you need clarification on the university's policies on plagiarism, please consult the *Code of Behaviour on Academic Matters* from this website: [www.artsci.utoronto.ca/osai/students](http://www.artsci.utoronto.ca/osai/students)

Feedback on the course is solicited during end-of-term evaluations. However, feedback before that point is encouraged, to improve the delivery of the course. Please make sure your concerns are voiced to the course instructor or the teaching assistants whenever possible.