

## CSC303 Social and Information Networks - Winter 2026

Instructor: Peter Marbach (email: [marbach@cs.toronto.edu](mailto:marbach@cs.toronto.edu))  
Office hour: Wednesdays 4:30-5:30pm

**Course Topics:** A course on how networks underlie the social, technological, and natural worlds, with an emphasis on developing intuitions for broadly applicable concepts in network analysis. Topics include: introductions to graph theory, network concepts, social networks, information networks, network dynamics, and information diffusion.

**Text Book:** “Networks, Crowds, and Markets: Reasoning About a Highly Connected World,” by D. Easley and J. Kleinberg. The book is freely available from the authors, at <http://www.cs.cornell.edu/home/kleinber/networks-book/networks-book.pdf>

### Schedule:

Week 1:	Networks, Graph Concepts	Chapter 1/2
Week 2:	Strong and Weak Ties	Chapter 3
Week 3:	Homophily and Influence	Chapter 4
Week 4:	Structural Balance	Chapter 5
Week 5:	Small Worlds	Chapter 20
Week 6:	Information Cascades	Chapter 16
Week 7:	Power Laws & Richer Get Richer	Chapter 18
Week 8:	Voting	Chapter 23
Week 9:	Gossip & Decentralized Voting	
Week 10/11:	Socially Responsive Agents & Social Reward Economy	
Week 12:	Review	

**Assignments:** There are four video assignment. For each assignment, you are given a specific topic that you must cover in the video. The audience of your video are 3rd year undergraduate students who did not take any course on social and information networks. Information on the structure and length of the videos, and the grading scheme will be provided in a separate announcement.  
**Note the due dates and times!! Late assignments will not be accepted.**

**Grading Scheme:**

Video Assignment 1:	6 %
Video Assignment 2-4:	18%
Final :	40%

**Course Requirement for Passing:** To obtain credit for this course, students must:

- Achieve an overall final grade of at least 50%; **and**
- Achieve a mark of at least 50% on the final examination.

Failure to meet the minimum threshold on the final exam will result in a failing grade (F) for the course, regardless of the marks earned in other course components.

**Submission Date/Times for Written and Video Assignments:**

Assignment 1:	Due Friday, Jan. 25, 10pm
Assignment 2:	Due Friday, Feb. 22, 10pm
Assignment 3:	Due Friday, March 15, 10pm
Assignment 4:	Due Friday, April 5, 10pm

**Exercises:** There are weekly exercises that we discuss in the tutorials.