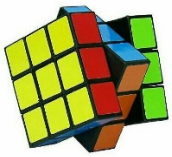


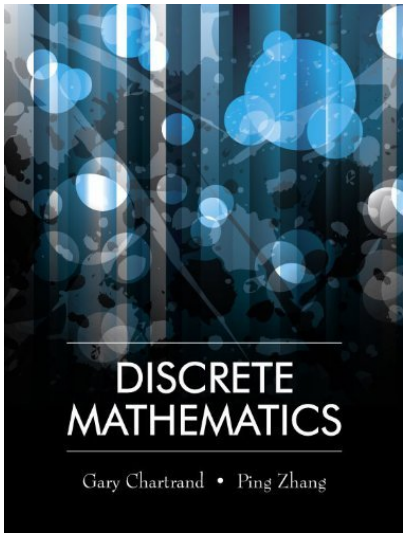
CSCI 2011: Discrete Structures of Computer Science (Fall 2021)

Feng Qian, CS&E, University of Minnesota Twin Cities

- **Course Goal**
  Learn mathematics foundations of computer sciences, including logic, set, proof, relations, functions, and basic number theory.

- **Basic Information**

Credits:	4
Instructor:	Professor Feng Qian (fengqian@umn.edu)
Teaching Assistants:	Andrius Adomavicius (adoma010@umn.edu) Yu Liu (liu00885@umn.edu) Ryan McGregor (mcgre186@umn.edu) Kashif Qureshi (qures072@umn.edu)
Main Lecture:	Monday 6:30PM – 9:00PM In-person: Tate Hall 101 Online: https://umn.zoom.us/j/91098862624?pwd=ZnYzNlJLYlkrSzB3bm5qZU5idVNXUT09
Canvas URL:	https://canvas.umn.edu/courses/268427 All announcements, homework assignments, lecture slides, grades will be published on Canvas.
Required Textbook:	**Discrete Mathematics (1st Edition)** by Chartrand and Zhang Waveland Inc., 2011. ISBN: 978-1577667308



- **Teaching Mode**
  - The main lectures on Monday will be delivered in person, but the students can choose to attend the lectures online over Zoom.
  - Discussion sections are online over Zoom.
  - The TA and professor's office hours are online over Zoom.

- **COVID-19 Precautions**

  This course will be taught in person. However, if the Covid-19 situation worsens, a mid-semester pivot to another teaching modality (e.g., over Zoom) may occur, depending on what the University decides. This may result in changes to the information on these pages.

  To ensure the health and safety of everyone during these difficult times, the following precautions will be taken in this course.

  Vaccination and masking: The University requires that all students are fully vaccinated and that faculty and staff provide a written attestation of their vaccination status. Furthermore, everyone is required to wear a mask while inside a University building, regardless of vaccination status. (More information on these requirements is here.) **Please ensure that you follow these requirements and, to the extent possible, practice appropriate social distancing in the classroom.**

  Stable seating: The University recommends that students try to sit in the same seat for every lecture. This will facilitate contact tracing in the event someone tests Covid-positive during the semester.

  Interaction: Other than the lectures, all interactions with the instructor and TA (e.g., office hours, after-class discussions, etc.) will be online only (over Zoom). Please avoid milling around in groups before/after class.

  Homework submission: To minimize potential virus transmission via surface contact, there will be no exchange of any paper materials during the semester, except for the exam paper. All homework will be submitted, graded, and returned online only (via Canvas).

  Online access to lectures: Lectures will be recorded and made available online in real-time to all students. This is to help reduce the risk of in-class exposure to the virus and to allow students who test positive to continue taking the course remotely. However, in this mode, it may not be possible to interact with the instructor during lectures or participate in in-class discussions.

  While the above setup is far from ideal, every effort will be made to make the course as accessible, engaging, and useful as possible. Thanks for your understanding and cooperation.

- **Main Lecture**

Who	Where	When
Prof. Qian	In-person: Tate Hall 101 Online: https://umn.zoom.us/j/91098862624?pwd=ZnYzNlJLYlkrSzB3bm5qZU5idVNXUT09	Monday 6:30PM – 9:00PM

- **Discussion Sections**

Who	Where	When
Andrius Adomavicius	https://umn.zoom.us/j/4802001478	Thursday 4:40PM – 5:30PM
Yu Liu	https://umn.zoom.us/j/2906831719	Thursday 5:45PM – 6:35PM
Andrius Adomavicius	https://umn.zoom.us/j/4802001478	Thursday 6:50PM – 7:40PM
Yu Liu	https://umn.zoom.us/j/2906831719	Friday 10:10AM – 11:00AM

- **Office Hours**

Who	Where	When
Andrius Adomavicius	https://umn.zoom.us/j/4802001478	Thursday, 12pm-1pm
Yu Liu	https://umn.zoom.us/j/2906831719	Thursday, 2pm-3pm
Ryan McGregor	https://umn.zoom.us/j/3821871019?pwd=ZUNLVllGaFpBblhyMHhSb0paZWIrQT09	Tuesday, 12pm-1pm
Kashif Qureshi	https://umn.zoom.us/j/2060375520	Monday 8am-9am
Professor Qian	https://umn.zoom.us/j/92646533181?pwd=THh1b3VWRlY1RW12K0tsbkNrbTdDdz09	Tuesday, 7pm-8:30pm

- **Email Policy**
  The professor and TAs can be reached at **csci2011@umn.edu**. Any course-related email should be sent (from a UMN email address) to this mailing list address unless you want to contact the professor or the TAs individually.

- **Prerequisites**
  MATH 1271 or MATH 1371.

- **Grade Distribution**
  Midterm Exam: 35%; Final Exam: 45%; Homework (no more than 7): 20%.
  Both midterm and final exams are closed-book, in-person.

- **Grading Policy**
  Policy 1

Total Score	[90, 100]	[80, 90)	[70,80)	[60,70)	[0,60)
Grade	A Level (A or A-)	B Level (B+, B, or B-)	C Level (C+, C, or C-)	D Level (D+ or D)	F

  Policy 2

% Students	The Top 30%	The Next 40%	The Next 30%
Grade	A Level (A or A-)	B Level (B+, B, or B-)	C, D, or F Level (C+, C, C-, D+, D, or F)

  For each student, the policy that gives **a higher grade** will be applied.

- **Late Policy**
  Late submissions of homework receive no credit.

- **Honor Code**
  All students must follow the UMN Honor Code:
  https://regents.umn.edu/sites/regents.umn.edu/files/policies/Student_Conduct_Code.pdf
  All homework assignments are individual assignments, and no collaboration among students is allowed. Any violations of the honor code will be dealt with strictly.

- **Disability Accommodations**
  We desire to make learning rewarding and fun for all students and make every attempt to accommodate anyone who has a desire to learn. If you require special classroom or test-taking accommodations, you need to contact the Disability Resource Center (https://disability.umn.edu/) and also notify the instructor as soon as possible at the start of the semester.

- **Tentative Course Schedule**
  Note that the schedule is tentative and is subject to change. Always keep an eye on Canvas for latest announcements and updates.

Week	Date	Topic
1	9/13	Course introduction, Logic I (Chapter 1)

2	9/20	Logic II (Chapter 1)
3	9/27	Logic III (Chapter 1), Set I (Chapter 2)
4	10/4	Set II (Chapter 2), Methods of Proof I (Chapter 3)
5	10/11	Methods of Proof II (Chapter 3)
6	10/18	Mathematical Induction (Chapter 4)
7	10/25	**Midterm Exam**
8	11/1	Relations and Functions I (Chapter 5)
9	11/8	Relations and Functions II (Chapter 5)
10	11/15	Relations and Functions III (Chapter 5)
11	11/22	Integers I (Chapter 7)
12	11/29	Integers II (Chapter 7)
13	12/6	Integers III (Chapter 7)
14	12/13	Course review
	TBD	**Final Exam**