MATH 2000 (DISCRETE MATH), SECTION 002, FALL 2025, UNT

1. People

- Instructor: Jing Zhang
- Office: GAB 402
- Email: Jing.Zhang2@unt.edu
- Office hour: TBA

2. Schedule and location of lectures

MW 2pm-3:20pm , CURY 210

3. Course overview

3.1. **Course Description.** In MATH 2000, students learn the basic concepts and ideas necessary for upper-division courses in mathematics. We introduce elementary mathematical logic, sets, functions, and relations, and we study different methods of mathematical proof with a strong emphasis on mathematical induction. Time permitting, we will apply these methods to prove more advanced theorems concerning sets, graphs and numbers.

3.2. **Prerequisites.** MATH 1710 or MATH 1810 (may be taken concurrently).

4. The main reference

- Title: Discrete Mathematics with Applications, 5th Edition
- Author: Susanna S. Epp
- Publisher: Cengage Learning

5. Other readings

- *How to Solve It: A New Aspect of Mathematical Method*, Princeton University Press, by G. Polya
- *Proofs from THE BOOK*, Martin Aigner and Günter M. Ziegler
- *What Is the Name of This Book?: The Riddle of Dracula and Other Logical Puzzles*, by Raymond M. Smullyan

6. Tentative course schedule

6.1. **Fall.**

Week 1 Aug 18: 2.1+2.2, Aug 20: 3.1+3.2
Week 2 Aug 25: 3.3+4.1+4.2, Aug 27: 4.3+4.4+HW
Week 3 Sept 1: Labor day no class, Sept 3: 4.5
Week 4 Sept 8: 4.7, Sept 10: 4.8+5.1+HW
Week 5 Sept 15: 5.2, Sept 17: 5.3
Week 6 Sept 22: 5.4+5.6, Sept 24: 5.6+HW
Week 7 Sept 29: 5.7+6.1, Oct 1: 6.1
Week 8 Oct 6: 6.2, Oct 8: 7.1+HW

Week 9 Oct 13: MIDTERM, Oct 15: 7.2
Week 10 Oct 20: 7.3, Oct 22: 8.1+8.2+HW
Week 11 Oct 27: 8.1+8.2, Oct 29: 8.2+8.3
Week 12 Nov 3: 8.3+8.4, Nov 5: 8.4+HW
Week 13 Nov 10: 8.4, Nov 12: 8.4
Week 14 Nov 17, Nov 19: selected topics+HW
Week 15 Nov 24, Nov 26: Thanksgiving break, no class
Week 16 Dec 1, Dec 3: Review
 FINAL Dec 8, 2:00 - 4:00 pm

7. Evaluation/grading scheme

7.1. **Breakdown.**

- Homework, 30%
- Midterm, 30%
- Final, 40%.

7.2. **Assignments.** 7 assignments of which the two with lowest grades will be dropped (no submission = late submission gets zero). Tentative due dates can be found in this document. The assignments will be in the form of problem sets.

7.3. **On collaborations.** Discussions/collaborations with human beings on problem sets are allowed. However, please write down your submissions independently. Identical or unreasonably similar assignment submissions will be treated as a violation of academic integrity and will be reported and handled accordingly.

8. UNT policies

8.1. **Academic Integrity Policy:** According to UNT Policy 06.003, Student Academic Integrity, academic dishonesty occurs when students engage in behaviors including, but not limited to cheating, fabrication, facilitating academic dishonesty, forgery, plagiarism, and sabotage. A finding of academic dishonesty may result in a range of academic penalties or sanctions ranging from admonition to expulsion from the University.

8.2. **ADA Policy:** UNT makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide a student with an accommodation letter to be delivered to faculty to begin a private discussion regarding one's specific course needs. Students may request accommodations at any time, however, ODA notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of reasonable accommodation for every semester and must meet with each faculty member prior to implementation in each class. Students are strongly encouraged to deliver letters of reasonable accommodation during faculty office hours or by appointment. Faculty members have the authority to ask students to discuss such letters during their designated office hours to protect the privacy of the student. For additional information see the ODA website.

8.3. **Prohibition of Discrimination, Harassment, and Retaliation (Policy 16.004):** UNT prohibits discrimination and harassment because of race, color,national origin, religion, sex, sexual orientation, gender identity, gender expression, age, disability, genetic information, veteran status, or any other characteristic protected under applicable federal or state law in its application and admission processes; educational programs and activities; employment policies, procedures, and processes; and university facilities. The University takes active measures to prevent such conduct and investigates and takes remedial action when appropriate.

8.4. **Emergency Notification & Procedure:** UNT uses a system called Eagle Alert to quickly notify students with critical information in the event of an emergency (i.e., severe weather, campus closing, and health and public safety emergencies like chemical spills, fires, or violence). In the event of a university closure, please refer to Canvas for contingency plans for covering course materials.