

**Discrete Mathematics - MATH 2000.001 - Spring 2023**  
**TR 9:30 - 10:50am; Room: PHYS 112**

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**Instructor:** Steven Widmer

Office: GAB 423B, Email: [steven.widmer@unt.edu](mailto:steven.widmer@unt.edu)

**Office Hours:** Mon/Wed/Fri 10:30am - 12pm; Tue 11am - 1pm; and by appointment.

All office hour meetings will be held through Zoom, using the meeting ID: 229 534 1011. Office hours are for help with specific problems or for answering questions about the course, they are **NOT** for teaching the course material. I will have availability to meet at other times. Please send an email if you would like to schedule a time to meet outside of office hours.

**Final Exam:** Thursday, May 11, 8:00am - 10:00am

<http://registrar.unt.edu/exams/final-exam-schedule/spring>

**Textbook:** *Discrete Mathematics: Introduction to Mathematical Reasoning, Brief Edition*; by Susanna S. Epp

**Course Description :** (3 hours) Introduction to proof-writing, logic, sets, relations and functions, induction and recursion, combinatorics and counting techniques, discrete probability, and graphs.

**Grade Policy:**

Exam Average .....	50%
Homework .....	20%
Final Exam .....	30%

The grade distributions will be 90% - 100% is an A, 80% - less than 90% is a B, 70% - less than 80% is a C, 60% - less than 70% is a D, less than 60% is an F.

**Attendance:** Attendance is mandatory and students are expected to attend class meetings regularly. Students are responsible for all information given in class, regardless of their attendance.

**Homework:** No late homework will be accepted for any reason whatsoever. Homework will be collected each Thursday. Your homework assignment must be stapled together and ready to turn in at the beginning of class. The lowest two homework scores will be dropped when completing the semester grades. The homework assignments will be updated each week in Canvas to indicate what problems will be due.

**Exams:** You will have three exams and a comprehensive final exam. Actual exams dates and content will be announced in class, usually at least two weeks before the exam date. The tentative exam dates are Feb. 21, Mar. 30, May 2. Your lowest exam score will be replaced with your final exam score (if it's higher).

**Make-up Policy:** No make-up exams will be given for any reason. An exam may be taken prior to the scheduled date, and you must request for this accommodation via email at least one week prior to day you wish to take the early exam. If you miss an exam you will receive a 0 for that exam and your final exam score will replace the 0.

**Written Work:** Show all your work in clear steps on exams and homework. No (or little) work shown usually earns no credit - even if the answer is correct. Your proofs and solutions will be graded on four "C's": solutions must be clear, concise, complete, and correct. Your audience should be an average student in this course, someone who has read the problem but does not know a solution. Rule of thumb: If a fact is "obvious," then it can be proved in one or two lines, so you might as well include those lines. The back of the book contains hints, not solutions, to odd numbered problems: your solution must contain more detail than in the back of the book or any solution guide. Copying the hint from the back of the book will earn little or no credit. In general, proofs without enough detail or with confused steps will earn little or no credit.

**Academic Dishonesty:** Cooperation is encouraged in doing the homework assignments but not allowed on the quizzes/tests/exams. Cheating will not be tolerated. Any student found cheating will receive no credit on the assignment and a report will be filed with the office of academic integrity.

**ADA Policy:** UNT makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Access (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 accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information see the [ODA website](https://disability.unt.edu/) (<https://disability.unt.edu/>).

Math is not a spectator sport. You will not learn mathematics from watching your instructor or friends or a screen display ideas and solve problems. You must try the problems, finish problems, ask questions, make mistakes, correct mistakes, put concepts into your own words, and practice, practice, practice.

**Note:** This syllabus is subject to change as the instructor deems necessary. Any/all changes will be announced during regular class time. It is the responsibility of the student to attend each scheduled class to be informed of these changes.

# Course Calendar - Math 2000 - Spring 2023

This is a tentative calendar and may be changed at any time

Tuesday	Thursday
1/17 Sec 2.1 : Propositional Logic	1/19 Sec 2.1/2.2 : Propositional Logic
1/24 Sec 2.2 : Propositional Logic	1/26 Sec 3.1 : Predicate Logic
1/31 Labor Day - University Closed	2/2 Sec 3.2 : Predicate Logic
2/7 Sec 3.3 : Predicate Logic	2/9 Ch 4 - Direct Proofs
2/14 Ch 4 - Constructive Proofs	2/16 Review for Exam 1
2/21 <b>Exam 1</b>	2/23 Ch 4 - Indirect Proofs
2/28 Ch 4 - Other Proofs	3/2 Sec 5.1 : Series and Products
3/7 Sec 5.2 : Mathematical Induction	3/9 Sec 5.3, 5.4: Mathematical Induction
3/14 Spring Break	3/16 Spring Break
3/21 Sec 1.2, 6.1 : Sets and Set Operations	3/23 Sec 6.2 : Proofs About Sets
3/28 Review for Exam 2	3/30 <b>Exam 2</b>
4/4 Sec 6.2, 7.1 : Sets, Then Functions	4/6 Sec 7.1 : Functions
4/11 Sec 7.2, 7.3 : One-To-One, Onto	4/13 Sec 9.2 : Combinatorics
4/18 Sec 9.3 : Combinatorics	4/20 Sec 9.3, 9.4 : Incl/Exclusion; Pigeonhole
4/25 Sec 9.5, 9.6 : Combinatorics, Binomial Thm	4/27 Review for Exam 3
5/2 <b>Exam 3</b>	5/4 Review for Final Exam
5/9	5/11 Final Exam at 8:00am