

Math 310 — Discrete Mathematics

BR 264

MTHF 12:00-12:50pm

4 credits

Textbook: *Discrete Mathematics and Its Applications*,
7th edition, Kenneth Rosen, 2014**Instructor:** Professor Ellen Fagerstrom-Hill
Mathematics

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Office Hours: Mon/Tues/Thurs 10:00-11:30am
Mon/Wed/Thurs/Fri 3:00-4:30pm

**This syllabus and all supporting documents are available on my
webpage: web.mnstate.edu/Fagerstrom**

Course Description: Methods of proof, sets, logic, functions and relations, Boolean algebra, graph theory and number systems. Students must either have taken, or be concurrently enrolled in, MATH 262 Calculus II.

MSUM's standard is that one semester credit hour for undergraduates is meant to represent three hours of academic work per week during a regular length semester for the average student who has the expected preparation for the courses that he or she is enrolled in. For this class, this means that you are expected to put in 12 hours a week, only 3 hours and 20 minutes of which are in class. The remaining 8 hours and 40 minutes are expected to be outside of class time. Spending time reading the book, doing assignments, and studying for quizzes and exams is meant to be a significant part of this course. (This is why twelve credits is considered full time - it's equivalent to 36 hours per week. Note that you have to average 15 credit hours a semester to graduate in four years - the equivalent of 45 hours a week.)

Course Objectives and Student Learning Outcomes: The student will

- learn patterns of proofs to create their own proofs of mathematical concepts.
- understand basic notions of sets, relations.
- apply mathematical thinking to graphs and trees.

Attendance: Attendance is mandatory in the sense that you will not be given an opportunity to make up work from class that you miss, and it is up to you to learn the material on your own. I will not give you the lecture on a one-on-one basis in my office. Regardless of why you miss, missing class will likely mean that you won't understand the material as well as you should and your grades will likely suffer as well. Unfortunately this statement is true whether you miss class because you just didn't want to get up that morning or if you miss class because you had a major emergency (in fact, the better the reason for missing class is, the more students tend to not understand the material no matter how much they try to make it up, since they are distracted by other concerns in their lives). Missing class is strongly discouraged. It will not be directly penalized, however, except for exam days, and I do not take a formal attendance each day. Note that any work due will not be excused if you are not in class.

For a known absence due to military duty, jury duty, or other legal requirement, you must give me notice as soon as feasible and prior to the absence if it will require missing a quiz or exam. If you don't miss a quiz or exam, I don't need to know why you were gone unless you wish to tell me. Also, documentation will be required for a makeup to be graded. For an absence due to an official university activity, you must give me written notice at least two weeks prior to the absence, as per university policy (see <http://web.mnstate.edu/sthandbook/policiesprocedures/studentabsence.cfm>), for a makeup. I feel it is necessary to point out that relatively few faculty members or coaches remember to provide this notice in that time frame, but it is up to you to remind them, since insufficient notice will be your problem, not

SHOW ALL WORK. USE CORRECT NOTATION. GIVE EXACT ANSWERS UNLESS OTHERWISE NOTED.

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theirs. For an absence due to personal reasons such as illness or family emergencies, you should notify me as soon as feasible, before the absence in most cases. In order for a makeup to be graded, written documentation of the reason for the absence will be required. Examples are: a note from the doctor saying you were seen (it does not have to say what you were seen for), a copy of the police report for a minor car accident, funeral program or obituary, etc.. In the case of a funeral, if your relationship is not clear, I may ask you to write a sentence explaining the relationship and sign it.

Absences due to family vacations, reunions, weddings, etc., are not excused absences unless you inform me of them by Tuesday, September 3. Otherwise, I expect you to schedule such events around your class schedules if they come up during the semester, especially since the exam dates are already set.

If you know in advance that you will be gone, I expect you to turn in any assignments due while you are gone *before* you leave. Homework submitted after you return will not be graded for credit.

Academic Honesty: You are expected to do your own work. You may certainly work with others and get help on homework, but the work you submit should be your own work. Note that during quizzes and exams you will not be allowed to get help from others. Make sure that you learn the material while you do the homework - that is the purpose of the assignments. Then during the quiz or exam you can demonstrate your knowledge - that is the purpose of the quizzes and exams. Cheating and plagiarism will not be tolerated in any college course (or any course at any level). See the MSUM Academic Honesty policy (<http://web.mnstate.edu/sthandbook/policiesprocedures/academichonesty.cfm>) for more information and possible consequences of cheating.

Special Accommodations: Students with disabilities who believe they may need an accommodation in this class are encouraged to contact Greg Toutges, Director of Disability Services at 477-4318 (Voice) or 1-800-627-3529 (MRS/TTY), Flora Frick 154 as soon as possible to ensure that accommodations are implemented in a timely fashion. Information regarding Disability Services is available at <http://web.mnstate.edu/disability/>.

Course Requirements: You are expected to complete daily homework, complete and submit all graded work, and take and pass all the quizzes and exams on the scheduled dates.

Evaluation Standards: Your course grade will include homework, quiz, and exam grades. For more details, see the separate sheet with the grading tables and test dates.

Course Outline: See the separate sheet with the tentative daily schedule.

Calculators: A calculator will be unhelpful for this class, and is not required. We will do almost no numerical calculations in the course.

General Comments: For all graded work in this class, you must show work and reasoning for credit. It's important that the point of the problem is being met (in other words, if the point of the problem is to show or prove a known result, you have to show it in some detail). If I feel that you needed to show more work, I will indicate it.

I do not curve courses of this level. I grade you as individuals, and by whether or not you personally have mastered the material. I also very rarely give extra credit, and when I do it is to the entire class. If you come to my office at the end of the term and ask if you can do extra credit to improve your grade, my answer will be no. The grading scale and weights for the labs and exams are given on the separate page with the grading tables and exam dates.

I will in general return exams on the next class day. If you are not there when I return work, I will not give it to friends, roommates, or spouses, nor will I give out grade information on the phone or via a non-mnstate email address. (These restrictions are not arbitrary - they are based on federal law regarding student privacy.) I will bring the old assignments with me every day, so if you ask at the end of class you can get them then.

I expect you to be responsible for yourself as far as getting notes from a classmate if you miss class. I also expect you to turn in any work early if you know that you will miss class. *This includes those instances when the absence is due to an official university activity.*

Cell Phones: Turn off your cell phones when you go to class (this class or any other class). Cellular phones and other distracting devices generally have no place in a formal or semi-formal setting, such as a classroom. Having your phone on, even in vibrate mode, or texting during class is disrespectful to both your instructor and your classmates. If your cell phone rings, beeps, or has an audible vibrate during an exam I will reserve the right to require that you turn in what you have at that point, without finishing the exam, or to reduce your exam grade by 25%. The point is that such an interruption can hurt your classmates' exam grades. In mathematics in particular, regaining a train of thought that was interrupted by a classmate's phone can be very difficult for some students, and their exam grades correspondingly suffer. I strongly suggest that you always remember to turn off your phone. This policy applies to any other distracting device, such as a pager or alarm clock, as well.

Similarly, I expect you to respect the learning environment by being in class on time and ready, to do mathematics the entire period, and to remain in class until the end of the class. On those rare occasions where you must be late, show respect by taking off your coat and getting out your notebook in the hallway before entering the room, and sitting down in the first available seat by the door - even if it is not where you prefer to sit. That way you minimize the interruption to the classroom. In general, behavior that seriously disrupts the class may be dealt with by involving the MSUM Care Team or Campus Security, if applicable.

In addition, during exams, your cell phone (or any other electronic device) may not be visible at all - you must put it in your closed bookbag or something similar. If you use it for your watch, you will have to bring a different clock to exams or use the classroom clock.