

How to Pass Discrete Mathematics I

Discrete Mathematics is usually the first math class students take that requires students to understand how to read and write mathematics. In particular, it is often the first class students are required to write proofs. This class is probably unlike any other math class you have ever had before, so you should not expect the same practices that got you through earlier math classes to get you through this class. Below is a recommended outline of study habits that should not only allow you to pass but to obtain a solid foundation in Discrete Mathematics.

You may have been told at some point the rule of thumb about the amount of time you should spend on a class outside the classroom or you may not have, but this is a rule you should expect to apply for this class: most students should spend 2-3 hours per semester hour per week outside of class. You should plan on spending **6-9 hours** working on this class outside of class time during the fall or spring terms. During a 6 week summer term this translates to **15-22 hours** per week!

How to Study each Unit – times given are the approximate time per week during the Fall and Spring.

In class: Attend! We will cover material that will supplement your course notes and aid your understanding of the material. Class will not be a repetition of material you can read on your own. *Ask questions* about the material from the lecture notes and exercises.

(1/2 hour) Immediately after class: Review class notes and reread/rework material discussed in class that originally gave you difficulty. If you still have difficulty with that material go to office hours during that week.

Outside of Class before material is covered in class:

(3-5 hours): Begin by reading exercises that are assigned for a grade from the next set of material. You may not understand the questions, but that is ok. Next, read the course lecture notes, *including working on the exercises in the notes*.

Learn definitions. Make flash cards for definitions when necessary.

Learn properties, theorems, and formulas. Again, make flash cards when necessary.

Make notes and questions in margins and be sure to bring to class to discuss the material. Do NOT spend more than 15 minutes on any one exercise if you are not making progress. Mark that exercise as one to return to the following week and move on. When you come across material that you believe will help you in solving a graded exercise, make a note of it and/or try the exercise in question.

(1/2 hour): Take online quiz on unit.

Outside of Class after material is covered in class:

(3-4 hours): Work on exercises for the section. If you are not progressing with a problem, make a note about it to ask in the following class or office hours. Always reread them before turning them in!

If you are lost in an entire topic, come to office hours. Reread lecture note exercises and complete or correct. As needed: review definitions, theorems, and formulas; review exercises from lecture notes and work problems from the recommended exercises in the text covering the material you need more practice on.

If there is an exam in the next week, work the review when it becomes available. Exam problems are very similar to and sometimes cut-and-paste from the review. Most review problems come from problems in the lecture notes. To do well in this class you should do exercises in the lecture notes every week. Do not wait for the review to come out.

Comments on Lecture Notes:

The lecture notes provided for this class contain the material you will be expected to know. They also have many exercises that should help you test your understanding. The exercises run have a range of difficulty from basic to challenging. You should not expect to understand everything and be able to do all exercises the first time you read them. However, reading the material and working through the basics before we cover it in class will make lectures far more productive. The best use of your class time will be to go over material *after* you have read it and know all the basic definitions and properties. Class time should also be used to focus on your questions and if you have not read the material you will not know what your questions are. Once material is covered in class you should go back and work all exercises.

Structured Studying

(adapted from Dr. John Kerbs' Structure Study Guide):

Fill in the "Structured Study Schedule." Begin with inflexible time requirements then follow with flexible time requirements. Include all of the following as well as any other items that may be in your schedule.

- C = Class
- W = Work
- Sl = Sleep
- F = Food
- St = Study
- P = Play
- T = Travel

Note: Adequate sleep and food is necessary for good health and keeping your brain functioning! Remember to include the extras in life in your schedule (e.g. religious activities, sports, etc.) You need to plan on "play time" to have a life outside of classes.

Tips for Productive Studying – Many of these tips were based on memory and brain research.

- Study at the same place each day
 - Example: 5th floor of Strozier Library at the same table each day. (Memory studies show learning is "state" and "context" dependent.)
- Do NOT study where there are distractions. In particular, do not
 - Sit at a table with bad lighting, distracting noises, etc.
 - Sit near a t.v.
- Study for 90 minutes and take 10 minute breaks
- Structure your study schedule so that it runs with 2 or more complete 90 minute study periods.
- Avoid dehydration.
- Avoid hunger (and junk food) – granola bars, bananas, raisins, power bars, etc are good snacks.
- If you break for a meal between study sessions keep it to 30 minutes. Breaks are best kept to 10 minutes, but you have to take a *complete* break from studying during breaks.
- Avoid passive studying. When reading notes take your own notes, summarize, group topics into meaningful categories, write down questions about your reading, and work exercises provided in notes.
- Spread your weekly study time for each course so that you will study for each course at least 3 days each week outside of class.
- Study with other people and work through exercises with other people, but your initial reading and intensive studying should be done alone.

STRUCTURED STUDY SCHEDULE

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
6am – 7am							
7am – 8am							
8am – 9am							
9am – 10am							
10am – 11am							
11am – 12pm	MAD 2104		MAD 2104		MAD 2104		
12pm – 1pm							
1pm – 2pm							
2pm – 3pm							
3pm – 4pm							
4pm – 5pm							
5pm – 6pm							
6pm – 7pm							
7pm – 8pm							
8pm – 9pm							
9pm – 10pm							
10pm – 11pm							
11pm – 12am							
12am – 1am							
1am – 2am							
2am – 3am							
3am – 4am							
4am – 5am							
5am – 6am							