

Syllabus CMSC 250H, Spring 2026
Discrete Structures Honors

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1 Guide to this Document

This document has three parts with three very different functions.

1. Content: What is the content of the course.
2. Policy: How the course is run (office hours, tests, HW, etc).
3. General Info: This information is helpful for any course you take at UMCP.

2 Content

General Idea In this course we will learn how to prove simple and not-so-simple theorems in mathematics. Some of what we prove has direct relevance to computer science. The kind of math you learn is the kind of math that a computer scientist encounters.

All number-of-weeks are approximate:

1. Prop Logic and Circuits - 1 week
2. Pred Logic and Quantifiers and Order Notation - 1 week
3. Sets, functions, relations - 0.5 weeks
4. Proof Techniques, Mod Arithmetic, Basic Number Theory - 3 weeks
5. Induction - 3 weeks
6. Combinatorics, Probability, Bayes Theorem - 3 weeks
7. Pigeon Hole Principle, Ramsey Theory, Muffin Mathematics - 2 weeks
8. Countable and Uncountable sets. - 1 week
9. Optional topics depending on time - 1 week

Required Text There is no text. There will be notes online and slides online.

3 Policy

3.1 Basic Information

[Course Website](#)

Course title Discrete Structures Honors

Course Number CMSC 250H

Term: Spring 2026

Credits: 4

Course Dates Jan 27-May 7 except spring break which is March 16-20.

Lecture Time and Place Tu-Th 9:30-10:45. Room IRB 2207

Recitation Time and Place M-W 1:00-1:50. Room IRB 1207

ELMS Elms will have the recordings of the lectures. Only students from this class will have access to it.

Gradescope You will submit HW on gradescope and this is where you can see your grades and make re-grade requests.

3.2 Staff

Instructor William Gasarch gasarch@umd.edu, (301) 503-3157.

Office Hours Tu-Th 11:00-12:00, 2:00-3:00 in IRB 2242.

Also by appointment, which can even be at night on [zoom](#)

TA Leo Velloso lvelloso@umd.edu, (301) 787-8110.

Office hours: Monday 2-4 in IRB 1266 study area across from CS help desk.

Also by appointment, which can even be at night on zoom: <https://umd.zoom.us/j/5179792228>

[Website of all ugrad course office hour locations](#)

Communication from you to Bill or Leo You should feel free to

1. email us,
2. post question on piazza, and
3. meet us in office hours or by appointment.

Communication from us to you We will email you

1. when HWs are posted,
2. when HW solutions are posted, and
3. other things you need to know.

3.3 Homework, Exams, In-class Work, Grading

For all of the below see the Academic Integrity section above for guidance on how much help you can get on the Homework, Exams, and Optional Project.

1. **Homework** There will be problems based on the material. They will be roughly once a week. The Homework will be posted on the course website (NOT on elms) in three forms. We do an example with hw00.

hw00.pdf

hw00.txt- this is plaintext

hw00.tex- this is LaTeX

You may use the .txt or .tex to help you typeset your homework.

After the Dead-Cat day has passed (see later for what that means) I will post hw00sol.pdf- Solutions to some of the problems.

Typed Homework must be typed and submitted on gradescope. If diagrams are needed to be drawn they can be handwritten.

Dead Cat Policy HW is posted on Tuesday sometime after class and is due by the next Tuesday before class (9:30AM). But *everyone* gets an extension to Thursday at before class (9:30AM). *Do not think the real deadline is Thursday.* I have already given you an extension to Thursday, hence I am not going to give you another one. I use the phrase **Morally due Tuesday Feb 10, 9:30** to mean you can hand it in either then or, without penalty, on Feb 12, 9:30. **Do not abuse the privilege.**

2. **In Class Midterm** March 31, 2026.
3. **Final** The final will be in class. I do not know what day/time yet.

3.4 Grading Structure

We will make each HW worth 2% of the grade. We intend to have around 12 HW. We will also have about 6 honors HW, worth 1% each. These will be based on the material we do that is not in the non-honors 250. That leads to the following table; however, if we have a different number of HW this will change slightly.

There will be times in class where I say **Everyone get into groups to work on a problem** I intend to do this 10 times but it may vary. Each time you participate that's 1% of your grade. You will not know ahead of time when I will do this, since I will not know ahead of time. Hence you should come to class.

I understand that there are (rare) times when you are not in class. Hence you can miss 3 of these in-class assignments without penalty.

Coursework	Percent of Grade
Homework	24%
honors HW	6%
Midterm	25%
Final	35%
In-class	10%

Grades will be roughly

- 85-100 is an A
- 70-84 is a B
- 50-69 is a C

(I can't imagine anyone getting ≤ 50). Notice that (1) this is rough- there may be some adjustments in any direction, and (2) this will be further refined with + and - after the final.

Extra Credit I will assign extra credit problems. These **do not** count towards the grade. They **do** count towards a letter I may write for you at some later point.

Academic Integrity

Homework You may talk to your fellow students and use AI tools; however, you must hand in your own work and **understand it**. If you use an AI tool then you must let us know which one you used. **Advice** if you get help from either a human or computer source **Check your work**. **Warning** ChatGPT and other AI's do not do that well in this course (yet).

Exams These must be solely your own work. There will be an in-class midterm and an in-class final.

3.5 Course Evaluations

Course Evaluations In May you will be asked to fill out course evals. I will urge you to fill out, not just the eval for me, but the eval for **all** of your courses. I have been on the committees that reads these evals and it is important that they be filled out.

4 General Information

We follow [University Policies](#).

4.1 UMD Policies and Resources for Undergraduate Courses

It is our shared responsibility to know and abide by the [UMD policies](#) that relate to all courses, which include topic like

- Academic Integrity
- Student and Instructor Conduct
- Accessibility and Accommodations
- Attendance and Excused Absences
- Grades and Appeals
- Copyright and Intellectual Property.

4.2 Accessibility and Disability Services

The University of Maryland is committed to creating and maintaining a welcoming and inclusive educational, working, and living environment for people of all abilities. The University of Maryland is also committed to the principle that no qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs, or activities of the University, or be subjected to discrimination. The Accessibility & [Disability Service \(ADS\)](#) provides reasonable

accommodations to qualified individuals to provide equal access to services, programs and activities. ADS cannot assist retroactively, so it is generally best to request accommodations several weeks before the semester begins or as soon as a disability becomes known. Any student who needs accommodations should contact me as soon as possible so that I have sufficient time to make arrangements. For assistance in obtaining an accommodation, contact Accessibility and Disability Service at 301-314-7682, or email them at ads-frontdesk@umd.edu. Information about sharing your accommodations with instructors, note taking assistance and more is available from the Counseling Center.

4.3 Student Resources and Services

If you are not doing well in the course and want to do better feel free to talk to me so we can see what we can do. There are also campus services that might be helpful:

[Tutoring and Academic Success](#)

[UMD Writing Center](#)

[Website of Heath Services](#)

4.4 Basic Needs Security

If you have difficulty affording groceries or accessing sufficient food to eat every day or lack a safe and stable place to live, please visit [the UMD Division of Student Affairs website](#) for information about resources the campus offers you.