Discrete Math with Python

A Computer Science AND Math Class

Introductions

1. What's your name and pronouns?
2. What's your favorite smell?
3. Would you rather be 5 years older or 2 years younger?

Course Syllabus CMP 431

This course will focus on learning the programming language python, while simultaneously teaching elements of Discrete Math

We will learn

- Python: syntax & style, variables, functions, looping, Strings, lists, dictionaries, files, algorithms
- Discrete Math: Sets, functions, numbering systems, sequences and sums, parity, permutation, combination, probability, recurrence, recursion, graph theory

What we'll use

Python

For python, we will primarily use Repl.it, an web-based development environment for all sorts of programming languages.
Repl.it will be the primary source of homework assignments

Textbook

Our textbook will be *Coding in Python and Elements of Discrete Mathematics*, written by Gary and Maria Litvin.

What class will look like

Homework

Most of our homework will be on Repl.it, but there may be exceptions to this.

You will receive an invitation to our Repl.it team in the first few days of class. Your assignments will be posted when they are assigned to our Repl.it team page.

Class

Class will look different depending on what we are learning.

1. When we are focusing on learning python fundamentals we will work in groups
2. When we are learning discrete math, we will shift between lecture, groups, and project work

Grading

Our course will be split up into the following categories for grades:

Category	Percent of Overall Grade
Homework	30%
Reading Quizzes	20%
Projects	20%
Midterm	10%
Final	20%

Would you rather

have a tail that can’t grab things or wings that can’t fly

Grading - Effort Grades

Grade	Description
5	Your preparation and engagement are consistently unacceptable.
4	Your preparation and engagement are inconsistent and need improvement.
3	Your preparation and engagement consistently meet expectations.
2	Your preparation and engagement consistently meet and sometimes exceed expectations.
1	Your preparation and engagement are consistently outstanding.

Academic Integrity

It is never appropriate for you disguise someone else's work as your own.

You are not allowed to use someone’s code if it is disguised as your own. If they assist you with the code, or write any line, you must attribute them.

Academic Integrity Statement (quoted from the student handbook):

Northfield Mount Hermon is an educational community committed to cultivating high standards and accountability. Ethical behavior is expected of every community member in all aspects of school life, including academic endeavors.

A critical part of academic excellence is ethical use of information, which includes honest representation of a student's work. Students and faculty are expected to demonstrate the principles and practices of academic integrity, as well as to understand what constitutes academic fraud.

Course expectations

In-class

- You should be respectful of yourself an others
- Bring your computer every day, charged and ready
- Be ready to collaborate

Remote

- Your camera must be on (if possible)

Homework

- Homework due dates are not hard deadlines, but strong suggestions