

MATH 220: FINITE MATH (3 units)

SECTION 21 — 2025 SUMMER

Instructor Information

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Office Hours: F 13:00P-14:00P in person

Class Information

Dates: 6/9/2025 – 7/11/2025

Time: MTWRF 11:00A-12:45P

Classroom: Cupples II, Room 200

Course Description

Topics from discrete mathematics will be explored with an emphasis on problem-solving and methods of proofs. Modules on counting, combinatorial tools, binomial coefficients and Pascal's triangle; Fibonacci numbers; combinatorial probability; integers, divisors and primes; and graphs will be covered, as well as additional topics as time permits.

Textbook

Textbook: A standard textbook like *Discrete Mathematics and its Applications, 8th ed.*, by Rosen is recommended but not required. Extra material will be provided to students via Canvas.

Course Objectives

After this course, you should be able to...

- Be comfortable with mathematical language. Understand key terms such as axioms, propositions, and definitions.
- Understand what a mathematical proof is. Apply the proof techniques, including induction, working from definitions, proofs by cases, and contradiction, among others.
- Be familiar with mathematical structures like sets, functions, integers, graphs, and so on. Be able to write true statements and proofs of those structures.
- Learn to apply combinatorial tools like different techniques of counting.

Grading

The grade consists of 3 parts.

- Homework (30%): Homework assignments will be assigned weekly on Canvas and be due on the next Wednesday at 11:59 pm (Central Time), starting the first week of class. The lowest score will be dropped.

- Quizzes (30%): Short and closed-book quizzes will be given in class each Friday for the first four weeks of class. The lowest quiz score will be dropped.
- Final Exam (30%): The final exam will be held in-class on Friday 7/11. It will be open-book.
- Participation (10%): If you attend most of the classes and answer the questions occasionally, you will get the full mark for this part. You can skip two classes without losing any points.
- Presentation (optional): If you are unsatisfied with the grades of Homework or Quizzes, you may give a 20 minute presentation on a related topic to earn extra points. Talk to the instructor about this option as soon as possible.

Grade Scale

Final grades will be assigned according to the following scale:

A	92 – 100	C+	76 – 79
A–	89 – 92	C	72 – 76
B+	86 – 89	C–	70 – 72
B	82 – 86	D	59 – 69
B–	79 – 82	F	0 – 59

Collaboration

Collaboration is both allowed and encouraged when solving the homework problems; however, homework solutions must be written independently. No collaboration is permitted on exams or quizzes.

Academic Honesty

All students are expected to comply with WashU's academic integrity policy:

<https://wustl.edu/about/compliance-policies/academic-policies/undergraduate-student-academic-integrity-policy/>

Accommodations and Student Accessibility

Washington University is committed to providing accommodations and/or services to students with documented disabilities. Students who are seeking support for a disability or a suspected disability should contact Disability Resources. Disability Resources is responsible for approving all disability-related accommodations for WU students, and students are responsible for providing faculty members with formal documentation of their approved accommodations at least two weeks prior to using those accommodations: <https://students.wustl.edu/disability-resources/>