

Math 375-01: Discrete Math
MT HF 2:00 - 2:50 pm
Classroom: Wissink Hall 288
My Office: Wissink Hall 263

Professor: Dan Singer
Webpage: <http://mavdisk.mnsu.edu/singed/>
Email: dan.singer@mnsu.edu
Office Hours: MT HF 1:00, 3:00, 4:00

Course Description: The two main topics of this course are Enumerative Combinatorics and Graph Theory. Enumerative Combinatorics is the art counting discrete objects and includes inclusion-exclusion, recurrence relations, generating functions, and Pólyas method for counting objects with symmetries. Graphs are used to model a variety of problems in discrete mathematics, and we will develop many of their properties. I will distribute notes on selected topics as needed. Please read these carefully and use them to help you take notes in class.

Prerequisite: Math 247 with a C or better or consent.

Textbook: *A Walk Through Combinatorics, Third Edition*, Mikós Bóna, World Scientific Publishing Company, 2011.

Course Format: I will develop the material and work out a variety of examples in class. I am relying on students to take careful notes, read the textbook carefully, and write up the homework solutions thoroughly. The more thorough and precise you are in writing up homework solutions, the better you will understand the material.

How to Study for this Class: Read the textbook thoroughly, do the homework carefully, and think of questions to ask in class as you are doing both. Take notes during the lecture as needed. You will find it very helpful to read about the material before it is presented in class. You will also find it very helpful to get help from me during my office hours, and I encourage you to come to see me often for help.

Exam Policy: You may bring in a single sheet of notes to refer to during each quiz and exam. You may use a calculator.

Homework Policy: Sections covered in one week will be due the Friday of the following week. (Exception: sections covered in the last week are due on the day of the final exam.) Each submitted homework assignment will be marked Satisfactory (100 points) or Unsatisfactory (0 points). Homework must be written up carefully and stapled. If you have a question about any of the problems, make a note at the top of your homework and I will answer it in class, in office hours, or online.

Attendance Policy: I don't award points for attendance, but my exams are based on the assumption that students have attended 100% of all classes, have taken careful notes, have done all the homework, and have asked for help as needed.

Conduct: Smartphone, tablet and laptop use are prohibited. Please arrive on time, remain in your seats for the full class period (unless there is some kind of emergency), and don't interrupt the class with conversation. Your respectful conduct will be appreciated!

Grade Calculation: 5 Exams: 100 points each. Homework: 100 points. The final grade is determined by the scale below:

A: 540 - 600 points

B: 480 - 539 points

C: 420 - 479 points

D: 360 - 419 points

F: 0 - 359 points

All grades are final and non-negotiable. If you need a certain grade for whatever reason, you know what you need to do!

Final Exam: Friday, May 8, 12:30 p.m. - 2:30 p.m.

Class Schedule: See next page.

<u>Date</u>	<u>Agenda</u>	<u>Date</u>	<u>Agenda</u>
Mon Jan 12	class cancelled	Mon Mar 16	Chapter 8
Tue Jan 13	class cancelled	Tue Mar 17	Chapter 9
Thu Jan 15	Chapter 3	Thu Mar 19	Chapter 9
Fri Jan 16	Chapter 3	Fri Mar 20	Chapter 9
Mon Jan 19	MLK Day	Mon Mar 23	Chapter 9
Tue Jan 20	Chapter 3	Tue Mar 24	Chapter 9
Thu Jan 22	Chapter 3	Thu Mar 26	Chapter 9
Fri Jan 23	Chapter 4	Fri Mar 27	Chapter 9
Mon Jan 26	Chapter 4	Mon Mar 30	Exam 3 Chapter 8
Tue Jan 27	Chapter 4	Tue Mar 31	Chapter 10
Thu Jan 29	Chapter 4	Thu Apr 2	Chapter 10
Fri Jan 30	Chapter 4	Fri Apr 3	Chapter 10
Mon Feb 2	Chapter 5	Mon Apr 6	Chapter 10
Tue Feb 3	Chapter 5	Tue Apr 7	Chapter 10
Thu Feb 5	Chapter 5	Thu Apr 9	Chapter 10
Fri Feb 6	Chapter 5	Fri Apr 10	Chapter 10
Mon Feb 9	Chapter 5	Mon Apr 13	Chapter 12
Tue Feb 10	Chapter 7	Tue Apr 14	Chapter 12
Thu Feb 12	Chapter 7	Thu Apr 16	Chapter 12
Fri Feb 13	Exam 1 Chapters 3,4	Fri Apr 17	Chapter 12
Mon Feb 16	Chapter 7	Mon Apr 20	Chapter 18
Tue Feb 17	Chapter 7	Tue Apr 21	Chapter 18
Thu Feb 19	Chapter 8	Thu Apr 23	Chapter 18
Fri Feb 20	Chapter 8	Fri Apr 24	Exam 4, Chapters 9,10
Mon Feb 23	Chapter 8	Mon Apr 27	Chapter 18
Tue Feb 24	Chapter 8	Tue Apr 28	Chapter 18
Thu Feb 26	Chapter 8	Thu Apr 30	Chapter 18
Fri Feb 27	Chapter 8	Fri May 1	Chapter 18
Mon Mar 2	Chapter 8	Mon May 4	
Tue Mar 3	Exam 2 Chapters 5,7	Tue May 5	
Thu Mar 5	Chapter 8	Thu May 7	
Fri Mar 6	Chapter 8	Fri May 8	Exam 5, Chapters 12,18