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Fall 9-1-2021

### M 581.01: Combinatorics

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# M 581 -- Combinatorics, Fall 2021

## Contact information

- Instructor: Cory Palmer
- Office: 004E MATH
- E-mail: [cory.palmer@umontana.edu](mailto:cory.palmer@umontana.edu)
- Office hours: Monday 2-3 PM in 004E

## Course description

This course will be a graduate-level introduction and survey of combinatorics. Topics will include counting, recurrence relations, generating functions, Ramsey theory, extremal problems as well as some standard combinatorial methods (e.g. linear algebra and the probabilistic method).

## Textbook

*Combinatorial Mathematics* by Douglas B. West. We will cover chapters 1-4 and selected topics from chapters 10-16 as time permits.

## Class schedule

MWF: 10:00-10:50 AM in MATH 305.

## Homework

Homework will be assigned (roughly) every other week and will be due in class. You may work in groups on the homework but be sure to write up your own answers. Late homework will not be accepted. As a courtesy for unforeseen circumstances one homework grade will be dropped. Homework missed due to illness, etc (with proper documentation) will also be dropped. Homework will be graded both on correctness and clearness of arguments. Work that is too difficult to follow may be marked off. Homework will be submitted online through: <https://gradescope.com> (entry code in email).

## LaTeX

Written work must be typeset in LaTeX. I strongly recommend the free web-based LaTeX editor: <https://www.overleaf.com/>

## Presentation

Each student will give an in-class presentation. I will assign the topics to students. These presentations will be given periodically throughout the semester. As part of this presentation students will be expected to prepare a 1-page summary of their topic/lecture complete with references. This summary should be submitted to me at least a week before the planned presentation.

## Grading

Your grade will be composed of 70% homework and 30% in-class presentation. Letter grades and +/-s will be assigned according to the standard scale.

## Class website

Homework assignments will be posted to gradescope.

## COVID-19

- Mask use is required within the classroom or laboratory.
- If you feel sick and/or are exhibiting COVID-19 symptoms, please don't come to class and contact the Curry Health Center at (406) 243-4330.
- If you are required to isolate or quarantine, you will receive support in the class to ensure continued academic progress.
- UM recommends students get the COVID-19 vaccine. Please direct your questions or concerns about vaccines to Curry Health Center.
- Where social distancing (maintaining consistent 6 feet between individuals) is not possible, specific seating arrangements will be used to support contact tracing efforts.
- Class attendance and seating will be recorded to support contact tracing efforts.
- Drinking liquids and eating food is discouraged within the classroom.

## Accommodations

The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and the Office for Disability Equity (ODE). If you anticipate or experience barriers based on disability, please contact the ODE at: (406) 243-2243, [ode@umontana.edu](mailto:ode@umontana.edu), or visit [www.umt.edu/disability](http://www.umt.edu/disability) for more information. Retroactive accommodation requests will not be honored, so please, do not delay. As your instructor, I will work with you and the ODE to implement an effective accommodation, and you are welcome to contact me privately if you wish.

## Academic honesty

All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. All students need to be familiar with the Student Conduct Code. You can find it in the [A to Z Index](#) on the UM home page.

## Registration deadlines

Full registration deadlines can be found online on the [registrar calendar](#) (<http://www.umt.edu/registrar/calendar.php>).