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Fall 9-1-2020

### M 225.R02: Introduction to Discrete Mathematics

Cory T. Palmer

*University of Montana, Missoula*, [cory.palmer@umontana.edu](mailto:cory.palmer@umontana.edu)

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## M 225 -- Introduction to Discrete Mathematics, Fall 2020

### Contact information

- Instructor: Cory Palmer
- Office: Meetings on zoom only
- E-mail: [cory.palmer@umontana.edu](mailto:cory.palmer@umontana.edu)
- Office hours: TBA

### Course description

Mathematical concepts used in computer science with an emphasis on mathematical reasoning and proof techniques. Elementary logic, sets, functions and relations, combinatorics, mathematical induction, recursion and algorithms. Writing and understanding proofs will be an important part of this course.

### Learning outcomes

1. To gain an in-depth look at several central themes of discrete mathematics;
2. To learn to reason mathematically and communicate ideas in a clear and concise manner;
3. To use induction and other techniques of mathematical proofs.

### Class schedule

MWF: 12:00-12:50 PM. Lectures will be broadcast synchronously via zoom (link in email) and will be recorded and posted to Moodle. Some of you may have quick turnaround between in-person and remote courses. The university has set up remote learning spaces on campus. More information should be posted here: [https://www.umn.edu/umonline/keep\\_on\\_learning/default.php](https://www.umn.edu/umonline/keep_on_learning/default.php).

Here are some tips for taking an online course and making it a successful experience:

<https://www.northeastern.edu/graduate/blog/tips-for-taking-online-classes/>

### Textbook

*Discrete Mathematics – Elementary and Beyond* by Lovász, Pelikán, Vesztergombi. We will cover chapters 1-7 and selected topics from the remaining chapters as time permits.

### Homework

Homework will be assigned (roughly) every week. You may work in groups on the homework, but be sure to write up your own answers. Late homework will only be given partial credit and may not be given feedback. 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).

## Exams

There will be three exams one of which will serve as the final exam. These exams are open book, open notes, open internet, but with no outside help from other individuals (online or otherwise).

## Final exam

The final exam is scheduled for 8:00-10:00 AM, Monday, November 23.

## Grading

Your grade will be composed of: 30% homework and 70% from the three exams. Letter grades and +/-s will be assigned according to the standard scale.

## Class website

Homework assignments will be posted to gradescope. Recorded lectures and assigned readings will be posted to Moodle.

## Accommodations

The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and Disability Services for Students. If you think you may have a disability adversely affecting your academic performance, and you have not already registered with Disability Services, please contact Disability Services in Lommason Center 154 or 406.243.2243. I will work with you and Disability Services to provide an appropriate modification.

## 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](http://life.umt.edu/vpsa/student_conduct.php) ([http://life.umt.edu/vpsa/student\\_conduct.php](http://life.umt.edu/vpsa/student_conduct.php)).

## Registration deadlines

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