

MATH 2001: Introduction to Discrete Mathematics  
MWF 10:00-10:50 pm, ECCR 139

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Office hours: Monday 3 – 4 pm, Tuesday 10 – 11 am, Wednesday 3 – 4 pm.

**Course description.** Do you know a formula for adding up the first  $n$  positive integers,  $1 + 2 + \dots + n$ ? How can you find such a formula and convince yourself and others that it is actually correct?

The goal of this course is to enable you to read and write mathematical texts and to prove mathematical statements on your own. We will learn and practice these skills in the area of discrete mathematics (as opposed to “continuous” mathematics like calculus or analysis). In particular we will cover the following topics:

- sets
- logic
- methods of proof
- relations and functions
- graphs

**Assignments.** Every Wednesday I will hand out homework problems. Please hand in solutions at the beginning of class on the following Wednesday or send a pdf at least 30 minutes before class. Please use “Math 2001 - assignment  $n$ ” as title for the mail for the  $n$ -th assignment (otherwise I will not find and grade it). I will ask you to give short presentations in class.

Since communicating about mathematics is one goal of this course, you are allowed and encouraged to discuss your assignments with others. However I ask you to follow this approach: First try to solve your problem on your own. If you get seriously stuck, discuss it with your colleagues, tutor, me, etc. In any case write up the solutions that you hand in alone.

There will be a short quiz every Monday. There are 2 midterm exams in class on Wednesday, September 30, and on November 4 as well as a final exam on December 16, 4:30 – 7 pm.

Cheating on your assignments may result in a grade of 0. Please find the honor code of CU Boulder here <http://honorcode.colorado.edu/>

**Grading.** Your final grade will be determined by the scores of your homework, quizzes, midterms, and final exam. To combine these items the following weights will be used:

Homework: 30%

Quizzes: 20%

Midterms: 20%

Final exam: 30%

The 3 lowest homework scores and the 3 lowest quiz scores will not count towards the final grade.

**Texts.** Richard Hammack. The Book of Proof. Creative Commons, 2nd edition, 2013. Available for free: <http://www.people.vcu.edu/~rhammack/BookOfProof/>

**University regulations.** I am happy to accommodate disabilities or religious observances, or a request that I address you with a different name or pronoun than my roster indicates. Please contact me as soon as possible.

For details on accommodations please see <http://disabilityservices.colorado.edu/>

For details on university policies please see <http://www.colorado.edu/policies>