Class Meetings: Monday, Wednesday, Friday 12:20–1:10 PM, in Duane Physics G2B41

Instructor: Eric Stade (email: stade@colorado.edu)

Office Hours: Mondays 2–3 PM, Tuesdays 10–11 AM, and Wednesdays 10–11 AM, in MATH 305

Prerequisites: Requires prerequisite course of MATH 1300 or MATH 1310 or APPM 1345 or APPM 1350 (all minimum grade C-).

Course Canvas page: `https://canvas.colorado.edu/courses/100892`

Text. *Book of Proof* (a.k.a. "T-BOP"), by Richard Hammack

This text is available online, for FREE. You can access it from our Canvas page, or go directly to

`http://www.people.vcu.edu/~rhammack/BookOfProof/`

If you prefer a hard copy, these are available at the CU Bookstore.

Course notes. *Stuff about Proofs and Other Phenomena* (a.k.a. "S-POP"), available on our Canvas page cited above.

In addition, **lecture notes** will be posted online, AFTER the class in which they are delivered. I make no guarantees as to how soon after class they will appear; it could be as much as a week later. Though I will try to have all notes relevant to any given exam posted early enough that you can review them for that exam.

You should still come to class! Think of the posted lecture notes as a way of reviewing what you have learned in class. But you will miss **a lot** (not only in terms of points—see "Requirements and grades" below) if you skip class and rely only on the text and the posted lecture notes to learn the material. Learning is an *active* experience, and while reading is important (and any assigned reading is *critical* to the course), all by itself it's a somewhat passive way of learning.

Mathematics Academic Resource Center, also known as "The MARC." You may seek assistance with your math questions at the Mathematics Academic Resource Center, in Math 175. Hours and other details may be found at `https://math.colorado.edu/marc/`.

About the course. The main purpose of this course is to help develop your mathematical reasoning and communication abilities. Central to each of these missions is the careful use of language, by which we mean both carefully defined mathematical terms and ordinary expressions and sentences.

One of the principal forms of mathematical communication is the *proof*. In this course you will learn how to write mathematical proofs for the audience consisting of yourself, me, and you classmates. For some proofs you will need to provide quite a few details, while for others you can be brief. What is essential is that your proofs be clear, complete, concise, and correct.

Requirements and grades. Your grade in this course will be computed on the basis of:

(a) Exams (60% of your final grade).

You will have an **in-class** midterm exam, on **Wednesday, February 21**, and a **take-home** midterm exam, due at the start of class on **Friday April 5**.

You will also have an **in-class** final exam on **Wednesday, May 8, 1:30–4 p.m.**

Your exam scores will be weighted according to your performance. Specifically: the exam you do best on will count for 30% of your final grade; the one you do next best on will be worth 20%, and the one you do the least well on will be worth 10%.

(b) Homework (15% of your final grade). Written assignments will be due **by the start of class on Wednesdays,** with the following exceptions: no homework will be due on the first Wednesday of classes, on Wednesday, February 21 (the day of your in-class midterm), or on Wednesday, April 3 (the Wednesday of the week that your take-home exam is due).

All assignments will be posted on our Canvas page. Late homeworks will not be accepted.

Your lowest **two** homework scores will be dropped.

(c) Friday group or individual quizzes (15% of your final grade). Each Friday, there will be a *quiz* based on the material covered in class that week. Many of these quizzes will be completed in small groups; some you will be asked to complete individually. Some quizzes will be collected and graded; for some, you will get full credit just for completing the work in class. Some quizzes may take the entire period; some may only take 20 minutes or so. In other words, these quizzes might take various different forms.

Quizzes cannot be made up. However, you may miss up to **two** of these quizzes without penalty.

(d) Canvas discussions (5% of your final grade). On our Canvas page, there is a "Topics in Discrete Math" discussion that you will be asked to participate in every week or so. If you make meaningful, thoughtful posts to this discussion each week, you will get the full five points for the semester.

Postings to "Topics in Discrete Math" for a given week are due by 10 PM on the Sunday at the end of that week. You may miss up to **two** posts without penalty.

There will be additional discussion threads set up for posting, or responding to, questions about class, homework, etc.

(e) Participation and attendance (5% of your final grade). Please come to class, on time, and be attentive and engaged. I will take attendance on occasional, random days, and will take note of repeated absence or lateness. If you're frequently absent or late, your grade in this category will suffer. Points will also be deducted if you are physically, but not mentally, present, e.g. spending the class period on social media and whatnot.

You will get the full five points for regular attendance and participation over the course of the semester.

Please see the "ADDITIONAL IMPORTANT COURSE INFORMATION" header on our Canvas home page, for:

- **Guidelines for written assignments.** Please **read** and **follow** these guidelines for written work, such as homework assignments, exams, and discussion posts. You will lose points on written work if you stray too far from these guidelines!!

- **Other general information, concerning:** classroom behavior; requirements for infectious diseases; accommodation for disabilities, temporary medical conditions, and medical

isolation; preferred student names and pronouns; the CU Honor Code; sexual misconduct, discrimination, harassment and/or related retaliation; religious holidays; and mental health and wellness.