

Math 230 Syllabus, Fall 2024

Professor Information

Dr. Jamie Juul
Email: jamie.juul@colostate.edu or message me on Canvas
Office Hours: Tuesday 2-4pm
Office: Weber 121

Course Content and Objectives

This course aims to introduce students to proof techniques and various foundational mathematical concepts related to discrete mathematics. The objectives of this course are to give students the necessary skills to **solve a variety of problems** and to **write clear and convincing solutions** to these problems, including appropriate mathematical **proofs** relating to these topics. The topics we will cover include the basics of: **mathematical statements and proof techniques, induction, set theory, inequalities, number systems, counting, and functions**. This is a foundational course that will prepare you for future courses. This class will be different from math classes you have taken in the past. You should prepare to work hard this semester. Understanding mathematical arguments can be difficult, but when you get the hang of it, it can be rewarding and fun!

Class Meetings

Engineering E 105, Tuesdays 1-1:50pm, Thursdays 1-2:50pm

Textbook and Materials

- Textbook: Book of Proof, Third Edition by Richard Hammack
Available for free at <http://www.people.vcu.edu/~7Erhammack/BookOfProof/>. Or if you prefer, hard copies are available for purchase on Amazon, etc., find the ISBN on the website above.
- Announcements, class information, assignments, course materials etc. will be posted to **Canvas**.

Assessments and Grading

Homework

Homework will be due almost every week on Wednesdays at 11:59pm.

- You homework score will be based on
 - correctness of all short answer problems (on Canvas);
 - completeness of all long answer problems;
 - correctness of one long answer problem (determined by the instructor and not known to students in advance), this question may be resubmitted two times for additional credit in the two weeks following the initial due date.
- Start working on each homework set as early as possible to give yourself plenty of time to complete the problems and get help if necessary.
- You are permitted (and encouraged) to work with classmates on homework. However, you should try each problem on your own first and you **must** write up your own solutions.

Exams

There will be two midterm exams tentatively scheduled for **Thursday, October 3** and **Thursday, November 14**.

Do not miss exams. In the case of a missed midterm exam with a well-documented excuse contact me to set up an alternative assessment. If you do not contact me in a timely fashion, no makeup will be given.

Final Project

You will complete a final project consisting of a proof portfolio and a reflection paper. The final project will be due on the last day of the semester. Partial drafts of the project will be due during the semester. More details will follow.

Grading

The raw score for your final grade will be computed by taking a weighted average of your scores as follows:

Problem Sets: 40% (lowest score dropped, 5% each)

Exams: 30% (15% each)

Final Project: 30%

Final letter grades will be determined based on this score and will be no worse than the traditional grading system (90% for A-, 80% for B-, etc.).

Getting Help

If at any time during the semester you need help with the course materials, assignments, etc. you should seek assistance. There are many resources available to you, and you are encouraged to use them. **Do not fall behind** in the course. If you need help you can:

- come to office hours,
- talk to your classmates, and/or
- email me with a question or to arrange a time to meet outside office hours,
- check <https://mathematics.colostate.edu/about/mathematics-tutoring/> for tutoring options.

Accommodations, Policies and Resources

Students who require any type of accommodations should be in contact with the Student Disability Center and should ensure I know about any accommodations as soon as possible.

For CSU policies relevant to all courses and information on various resources follow this link <https://col.st/2FA2g>.

Academic Integrity

This course will adhere to the Academic Integrity Policy of the Colorado State University General Catalog and the Student Conduct Code. Students are expected to have read these documents. Penalties for violations may range from point deductions on any assignment to failure of the course.

Copying another student's work (even with their permission) is plagiarism, as is copying from solutions manuals, websites, or other sources. **Each student's solutions must be written in his or her own words.**

For exams, each student's work must be entirely his or her own. You are not permitted to look at another student's paper, talk with another student, use resources that have not been explicitly allowed, or get help from any person other than me.