

$$\forall x \exists y (P(x, y) \rightarrow Q(x, y))$$

Discrete Mathematics, Summer 2026
Math 2150 Section 001
ONLINE, REMOTE, ASYNCHRONOUS
3 credits

Professor: Dr. Greg Oman

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Office Hours: email me at the above address to set up a meeting in Microsoft Teams or Zoom. I'd rather try to offer help one-on-one; if this becomes too time-consuming, I'll make set office hours through Teams. PLEASE DO NOT HESITATE TO ASK ME FOR HELP IN THIS COURSE; I AM MORE THAN HAPPY TO MEET WITH YOU VIRTUALLY.

Course Web Page: <https://faculty.uccs.edu/goman/math-2150-summer-2026/>

Class Schedule: ONLINE (most weeks, I will post notes on M and W and lectures on T and R, with two homework assignments due per week, likely on Fridays and Tuesdays most weeks)

Texts: *Mathematical Reasoning: Writing and Proof, Version 2.1*: free download at <https://scholarworks.gvsu.edu/books/9/>, supplemented by *Discrete Mathematics and Its Applications, 6th Edition*, by Rosen: I have a PDF of the Rosen text. This is an older edition, but sharing it is still likely a no-no. But given the current price of tuition and the crazy times we are in, I don't really care (I will email it to you shortly). More on this soon. **PLEASE NOTE THAT THE ABOVE ARE MERELY SUPPLEMENTAL TEXTS TO THE LECTURE MATERIAL, BUT ARE NOT REQUIRED FOR THE COURSE.**

Course Objectives: Upon successful completion of the course, you should

- work with truth tables in propositional logic and be able to draw conclusions from them
- understand and be able to use the language of propositional logic to formalize statements
- understand and be able to use predicate logic and quantifiers to formulate statements
- be able to negate statements in predicate logic
- understand the fundamental proof techniques of direct proof, proof by contraposition, proof by contradiction, proof by cases, etc.
- be able to write complete proofs of certain mathematical statements
- understand the basic set-theoretic operations and be able to do proofs of set-theoretic relations and equalities
- understand and be able to use the principle of mathematical induction

(see next page)

Graded Components of the Course: Your grade will be based on two tests. Each test will be worth 50% of your grade. I reserve the right to see a **DOCUMENTED EXCUSE** in order to allow you to make up exams. Please take this statement seriously. I tentatively plan to give the first test (via Canvas) on **Thursday, July 9 from 3-5 pm** and **Friday, August 7 from 3-5 pm** (there will be no comprehensive final exam).

I will also be posting homework assignments, but AI has rendered a homework portion for your grade an exercise in giving out free points (of course, this is also an issue on exams, but there's not much I can do about this without creating a headache for everyone). What I will do is create a repository on Canvas for you to upload your homework, though it won't be required. BUT I will give you feedback on your work to help you prepare for the exams if you upload it. This is totally up to you to use or not.

I will decide plus and minus cutoffs before assigning final grades; modulo this, here is the grading scale:

90% – 100%: A or A-
80% – 89%: B+, B, or B-
70% – 79%: C+ or C (I don't give the grade C-)
60% – 69%: D+, D, or D-
< 60% : F

Homework and Lectures All assignments will be turned in (again, this is optional) on Canvas (**PDF only**). I will post assignments on the course web page as well as notes (NOTE THAT I WILL NOT BE POSTING ASSIGNMENTS AND NOTES ON CANVAS, BUT AT THE COURSE WEBPAGE LISTED ABOVE). I will also upload lectures to the course webpage using Panopto. If you are unsure of how to upload assignments via Canvas, just let me know and I am glad to help you.

Extra Help There is a PASS (peer assisted study session) leader for this course. I will be giving you information about this very soon, so please check your email.

Disability Services Please let me know of any additional accommodations you may require. Such accommodations should be approved by the Office of Disability Services, and they should have paperwork for you to give me. Let me know if you have questions.