Goals of the Course
To learn how to read, write, and speak mathematics. Discrete mathematics will be the subject matter that we use to explore mathematical arguments and proofs.

Grades
Your grade for this course will be determined by (in order of importance):

- a 2-hour cumulative final exam;
- four Milestone quizzes;
- four Milestone homework assignments;
- daily reading quizzes;
- your participation in class; and
- extra credit from colloquia and SUMS writeups.

At the end of this course you will get the grade that you earn based on your level of performance and understanding. I do not use a predetermined scale. Your grades will not be on Blackboard and it will not be possible for you to approximate your grade numerically throughout the semester. I am happy to discuss your performance in the class with you at any time. Your final course grade will be determined from your performance levels, statistical methods, the class average, and historical class averages. I reserve the right to decide borderline grades based on factors such as participation, effort, and improvement.

Why No Lectures?
This will be an active-learning class and I will do only a minimal amount of formal lecturing. A major goal of this class is for you to learn to communicate mathematics effectively and confidently, and you will learn that best by doing it yourselves every day. Class will have a discussion-based atmosphere, sometimes within groups and sometimes as a whole class. My job is to help you learn how to learn mathematics yourselves.

Reading Before Class
You are expected to read each section before class, and come to class prepared to take a reading quiz and answer questions. Reading a math book is not like reading a novel; you may have to read some passages multiple times, take notes, and work carefully through examples. The reading quizzes will add up over time and be a significant factor in your final grade, so come prepared.

Presentations
A few pointers on presenting work to the class: Don’t stand in front of what you are writing on the board. Talk to the class and not to the board or to Laura. Be as descriptive as possible; avoid words and phrases like “it” or “now do this.” Be prepared to answer questions from class members and from Laura during your presentation. And don’t be nervous. We will strive for a friendly, interactive, noncompetitive atmosphere in class.
Working in Groups
I encourage you to regularly meet with your groups and with other students outside of class. Students who form a group community tend to do much better in class, and therefore we will attempt to keep the same groups all semester. However, if you have a serious problem with your group then you should let me know.

Homework
You are responsible for all of the exercises in the textbook. A small selection of the exercises will be due at the start of class on Milestone Days, and must be submitted on paper and written in \LaTeX. Late homeworks will be accepted with a 10% deduction in points for each hour that they are late. You may work on homework assignments with other students, but writeups and \LaTeX must be done individually.

Milestone Quizzes
The four Milestone Quizzes will be taken individually and will occur on the same days, and cover the same material, as the four \LaTeX assignments. These are the “exams” of the course, and except for the final exam, these quizzes will be worth the most weight towards your grade.

Extra Credit
You can earn extra credit by attending and then giving typed 1-page writeups for up to two Mathematics and Statistics Department Colloquium talks; see the schedule online at the department website. You can also earn extra credit by attending the SUMS Conference on Saturday, September 29 and then giving a typed 1-page writeup. Information about the SUMS Conference can be found at www.jmu.edu/mathstat/sums.

Absences
If you are absent from class, then you will miss the reading quiz for that day. Those reading quizzes cannot be made up, but I will be dropping the lowest three. If you need to miss class for an extended period due to special circumstances, please let me know. If you have an emergency that causes you to miss a Milestone Day, you should let me know in advance, or contact me as soon as possible.

Honor Code
I take the honor code very seriously. Any instances of suspected cheating or academic dishonesty will be referred to the JMU Honor Board for investigation.

Getting Help
Please feel free to contact me by email, during office hours, or by instant message, text, or appointment (those options are in order as to what I most prefer). You may also be able to find some help at the Science and Math Learning Center on the second floor of Roop Hall. However, the best place to find help is with your group and other classmates. By working together outside of class you will be much stronger! You can join the Facebook group Math 245 Fall 2012 if you want to make contacts with other students in the class.

Who am I?
I went to college at the University of Chicago, got my Ph.D. in mathematics at Duke University, and then came to JMU to work in 2000. For my research I’ve studied algebraic geometry, knot theory, and the mathematics of games and puzzles such as Sudoku. I’m married, have a 7-year-old son, love to play Minecraft, and can beat you at MarioKart Wii.

Who are you?
I have a problem recognizing people, especially when they are out of context (for example, if you switch seats in class, come to my office hours, or run into me at the grocery store). When you see me outside of the classroom, please remind me of your name and what class you are in. And please do not be insulted if it takes me a long time to be able to recognize you or remember your name! For more information see www.geekhaus.com/faceblind.
Official JMU Syllabus Information

This course covers the topics of logic, set theory, relations and functions, mathematical induction and equivalent forms, recurrence relations, and counting techniques. The goals of this course are as follows:

- Provide students with a structured introduction to proof-writing.
- Prepare students for upper level theory courses by giving them the proof-writing skill and basic notions needed for these courses.
- Give students an introduction to fundamental notions of discrete mathematics, including but not limited to: counting, permutations, combinations, inclusion and exclusion, basic probability, and modular arithmetic.
- Give students proficiency with fundamental mathematical notions, including but not limited to: propositional and quantifier logic, truth tables, rudimentary set theory, functions, relations, mathematical induction and other proof techniques.
- Introduce students to LaTeX, the discipline-standard mathematical typesetting program.

For additional information, please see www.jmu.edu/syllabus.