Course Objectives: Continue to learn mathematics! Discrete mathematics is an introduction to mathematical proofs. Proofs, in turn, reflect the critical thinking skills, precision and rigor that characterize mathematics. Logical deduction is critical in any number of disciplines. A Roanoke grad who finished second in his class at Duke Law School credits discrete mathematics as the most important undergraduate course he took. The main objective of this course is to improve your thinking skills to enhance your success in whatever your profession becomes.

Intended Learning Outcomes: At the end of the course, successful students will be able to

- Describe and apply each of several methods of mathematical proof
- Analyze a logical argument, and identify and correct any logical fallacies
- State and prove fundamental facts in number theory and graph theory
- Apply recursive relations to construct and prove facts about sequences

Attendance Policy: Regular attendance is expected. You must keep up with definitions! You are responsible for everything done in class, through your attendance and sharing class notes with classmates. If you miss a class, you must e-mail or call me before class is over and explain why. If you have two unexplained absences, you will be dropped from the course.

Technology: We will use Mathematica occasionally in class and on homework assignments (and future courses, including independent studies). No electronic devices other than calculators are allowed in a test situation.

Academic Integrity: The college policy is fully supported. Tests and quizzes are closed notes, closed book. Homework assignments will be discussed in class, and you may always ask me for help. Do not collaborate on homework.

Study problems and homework: Problems from each section of the book will be assigned. You will be asked to work several problems that are not to be turned in. These will indicate the types of problems you will see on tests. In addition, you will often be asked to turn in designated problems. These are due at the beginning of class. These are extended problems beyond a typical book problem; you will more than one day to work on each one; please do so!

Co-Curricular: During the course of the semester, you must attend at least two approved co-curricular events offered by the math department. For each, write a one- or two-paragraph description of the event, due within a week of the event. A sample will be provided.

Tests: There will be four tests and a final exam. Each test will cover all material discussed since the previous test. Anticipated test dates are (W) 2/3, (F) 2/26, (F) 3/26 and (F) 4/16. The exam is Friday, April 23, 2:00-5:00.

Make-ups: In case of sickness or scheduling conflicts, get in touch with me ASAP.

Grading: Homework and co-curricular count 18%. The final counts 18%. Each test counts 16% of the final average. Grades may be curved up based on participation, one unusually low test score or other extenuating circumstance.
Math 131 Information Sheet

Name:

Intended Major:

Hometown:

List any other college math courses you have taken.

Do you have a Clicker?

Do you have an Iphone or other data phone?

What are your expectations and goals for this course?