Course Description  You will learn to critically examine the mathematical arguments of others, to construct arguments of your own, and to write clear and concise mathematics. Material includes elementary number theory; sets; logic and quantifiers; functions and relations; divisibility and modular arithmetic in the integers. Argument styles include direct proofs, proofs by contrapositive, proofs by contradiction, and proofs by induction.

Prerequisites  MA 211, Calculus III.

Text  None. You must acquire the software to produce LaTeX documents.

Requirements  We will proceed as a community of inquiry, which means that you will present arguments from the homework to the class and receive the feedback of others. You will in turn give others your feedback. Thus you must be present, and active. If you are unable to attend a class then you must tell me, for instance by email.

In addition to your class activity, you will have regular quizzes (both take-home and in-class), a mid-semester exam, and a final exam. The overall letter grade for the course weighs equally these four.

Meaning of your course grade  A D tells you that although you will get credit for this course, you have dead-ended: you are not prepared for following courses. A C says that you are minimally prepared for following courses but you should expect to have to work hard there. Do not consider a C an acceptable grade; it is a warning that you have gaps that you must fill. In contrast, a B states my judgement that you are well-prepared to move up to the next level. Finally, an A marks superior performance and is the way that I get to recognize your work and encourage you to go on.