

Mathematics 312  
Introduction to number theory  
Section 921  
Summer Term 1, 2019.  
T, Th, F 10-11:50, W 9:30 - 10:20  
Mathematics Annex 1100

- Instructor: Z. Reichstein
- Office: 1105 Math Annex
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**Textbook:** K. Rosen, *Elementary Number Theory*, 6th edition.

**Course description:** Math 312 is an introduction to the basic concepts of number theory, such as prime numbers, factorization, and congruences, as well as some of their applications, particularly to cryptography. Proofs are integral to the subject, they will be given in class and problems involving proofs will appear on the homework and on the tests. Rosen's book is well suited to this class; I will follow it closely. Here are the specific sections I plan to cover, subject to minor changes along the way: 1.3, 1.5, 3.1, 3.2, 3.3, 3.4, 3.5, 3.7, 4.1, 4.2, 4.3, 5.1, 5.5, 6.1, 6.2, 6.3, 7.1, 7.2, 7.3, 8.1, 8.4, 8.6 + additional topics from Chapters 9, 10 or 11, if time permits.

**Registration:** Questions regarding registering for this class should be addressed to the Mathematics Department office staff, Rm. 121 Mathematics Building.

**Course page:** For more detailed and up to date information on this course go to <http://www.math.ubc.ca/~reichst/312Su19syll.html>