

Date	Topic	My Notes	Assignments
T:1-13	Chapter 1 (Intro. and Euclidean Algorithm)	Lecture 1	
TH:1-15	Chapter 2 (prime & unique factorizations)	Lecture 2	
T:1-20	Chapter 3 (congruence or modular arithmetic)	Lecture 3	Mission 1 due
TH:1-22	Chapter 3 (congruence or modular arithmetic)	Lecture 4	
T:1-27	Chapter 3 (congruence or modular arithmetic)	Lecture 5	Mission 2 due
TH:1-29	On Hensel's Lemma (not in text)	Lecture 6	
T:2-3	Chapter 4 (RSA cryptography)	Lecture 7	Mission 3 due
TH:2-5	Number Theory Test 1		
T:2-10	Chapter 5 (Pell Equation)	Lecture 8	
TH: 2-12	Chapter 5 (Pell Equation)	Lecture 9	(Test 1 of 321 on 2-11)
T:2-17	Chapter 6 (Gaussian Integers)	Lecture 10	Mission 4 due
TH:2-19	Chapter 6 (Gaussian Integers)	Lecture 11	
T:2-24	Chapter 7 (Quadratic Integers)	Lecture 12	Mission 5 due
TH:2-26	Chapter 7 (Quadratic Integers)	Lecture 13	
T:3-3	Chapter 8 (4-squares identity)	Lecture 14	Mission 6 due
TH:3-5	Chapter 8 (4-squares identity)	Lecture 15	
	Spring Break: (3-9 to 14)		
T:3-17	Numbers	Lecture 16	Mission 7 due
TH:3-19	Number Theory Test 2		
T:3-24	Chapter 9 (quadratic reciprocity)	Lecture 17	
TH: 3-26	Chapter 9 (quadratic reciprocity)	Lecture 18	(Test 2 of 321 on 3-27)
T:3-31	Chapter 10 (Rings)	Lecture 19	
TH: 4-2	Chapter 10 (Rings)	Lecture 20	Mission 8 due
T:4-7	Chapter 11 (Ideals)	Lecture 21	
TH: 4-9	Chapter 11 (Ideals)	Lecture 22	
T:4-14	Chapter 11 (Ideals)	Lecture 23	Mission 9 due
TH: 4-16	Chapter 12 (Prime Ideals)	Lecture 24	
T:4-21	Chapter 12 (Prime Ideals)	Lecture 25	
TH: 4-23	Chapter 12 (Prime Ideals)	Lecture 26	Mission 10 due
T:4-28	Number Theory Test 3		
W: 4-29	Reading Day (no classes)		
M: 5-4	Final Exam (Monday, 8-10am, usual room)		

- Test 1,2 & 3 (450pts) / Missions (250pts) / Final = 300pts.
- The Text for this course is "Elements of Number Theory" by John Stillwell.
- Missions are due at the start of class. They should be written clearly, single-sided, in order, with a staple. You are welcome to ask me questions in office hours about problems in the Missions once you have attempted them. It is entirely likely that I ask you problems we have not seen worked in lecture. It is also entirely likely that I ask you problems similar to what we have worked in lecture. There are two purposes for homework. One purpose is to reinforce the examples and theory from lecture. A second, and equally important, purpose is to add breadth to the course. Breadth exercises increase your ability to read math. If nothing else, you will leave this course with a deeper appreciation and understanding of mathematical language. You are welcome to form study groups. Make sure at least one person in your group is able to ask me questions in office hours. Finally, if you think something is a typo, send me an email so I can help everybody if it is, or so I can help you get past your small misunderstanding before hours are lost. I try to answer email a few times a day, schedule permitting... The problems are worth at least 1pt per problem. However, each Mission has 5 hidden points. Thus, each Mission is worth 25pts.
- I don't currently have notes prepared for the entire course. I will follow Stillwell for the most part, there are a couple places I need to add something, those will be announced and indicated in the Missions in the

assigned reading. Also, I may post some hand-written notes as the course progresses (I include the labels "Lecture 1" to "Lecture 26" for organizational reasons). Your best bet is to take careful notes of what we discuss in lecture. In addition, you might do well to keep some sort of journal to write calculations as you study Stillwell.

- No notes or notecards are permitted for the in-class exam, tests or quizzes.
- If you would like to petition for Honors in this class, let me know, I have a project on p-adic numbers which you may complete.
- Note: I included the comment about Tests in Math 321 since many of you are also enrolled in that course, of course, sometimes, you'll have nontrivial responsibilities in both courses. This is life. I am trying to give you a heads-up about both schedules so you can plan accordingly. You really need to be doing homework for both courses on a more or less daily basis. Work in groups, ask me questions, your life will be less stressed. (even if you're not in Math 321, daily attention to homework is a must)