

Math 453 MWF 9 152 Henry Class Organization Fall 2005

Instructor: Prof. Bruce Reznick, 327 Altgeld Hall, 333-4284, reznick@math.uiuc.edu. My phone has voice mail and I frequently check and reply to my email, including weekends. Office hours are by appointment. I take them seriously, and they can usually be arranged within 24 hours. You are also encouraged to ask me questions immediately before, during and after class. I enjoy answering questions by email, so that I can post the (anonymized) question and my answer on the webpage (see below) for all to see. I'm terrible with names; don't take it personally. This course will have a webpage – <http://www.math.uiuc.edu/~reznick/math453.html>. This webpage will contain a “class diary”, which will summarize what happens in each class period for as long as I have the energy to do this. In any case, I will always put up links to .pdf handouts. It will be impossible for me to post exam solutions in advance.

Text and Syllabus: The text is *The Theory of Numbers* by Niven, Zuckerman and Montgomery. The syllabus is the standard one and is distributed separately. Be aware that (reading, understanding, constructing) proofs are an integral part of this course.

Homework Policy: Written homework will be assigned to be due weekly. Please staple or paper-clip your homework sheets (no folding over corners), and consider writing more than one draft. You are expected to spell correctly and write complete, grammatical sentences when possible in this and all your University assignments. Homework solutions will be distributed when the assignment is due. No late homework is accepted, but the lowest two homework scores (possibly zero) will be omitted in computing your homework average. In rare instances, you may be excused from an assignment, but the dropped scores are intended to cover ordinary illnesses, weddings, etc. **Collaboration in studying and working the homework is strongly encouraged! Collaboration without comprehension is a waste of time.** A phone and e-mail list will be distributed once the class stabilizes. It is my policy not to give specific homework help to individuals before an assignment is due. But if you ask a question in class or in email, I can further explain to *everybody* the underlying mathematics.

Exam Policy: There will be two Hour Exams; we will decide later whether the exams will be in class or in the evening. Painful recent experiences cause me to remind you that the dates of exams are not subject to individual negotiations. All exams will be closed-book and closed-note, and will resemble the homeworks. The Final Exam is comprehensive, and somewhat harder than the Hour Exams. The Final must be held at the scheduled time, 8:00-11:00 AM, Tuesday, December 13.

Grading Policy: Keep in mind that I am grading your work, not you as a person. Each Hour Exam counts 25%, the Final Exam counts 50% and the Homework counts 20%. The lowest 20% is dropped. (Again, painful recent experiences cause me to state that a missed exam cannot be dropped from the computation of the grade.) All grades are numerical. The highest possible grade cutoffs are: A/B – 90%, B/C – 80 %, C/D – 70%, D/F – 60%, by which I mean “A-/B+”, etc. I will try to keep you posted on any curving as the semester progresses. (I reserve the right to curve differently for undergrads and grads.) There are two exceptions to the numerical grading: anyone who gets 96% on the Final gets an A and anyone who gets 75% on the Final will pass. Experience has shown me that these exceptions rarely occur.

Philosophy: The purpose of this course is to introduce you to number theory, one of the most classical and beautiful parts of mathematics. Education is not a zero-sum game when done correctly. I do not consider you my adversaries, and hope the feeling is mutual. Become an active participant in this course. Let it get under your skin and visit your dreams. These are serious steps towards becoming a mathematician.