

# Math 488A, Math 575A, and Math 590H: Topics in Elementary Number Theory Summer 2010

Marcin Mazur

Office: LN 2228

Office Phone: 7-6540

E-mail: [mazur@math.binghamton.edu](mailto:mazur@math.binghamton.edu)

Course web page: [www.math.binghamton.edu/mazur/teach/summer10.html](http://www.math.binghamton.edu/mazur/teach/summer10.html)

**Office Hours:** M-F 11:10-12:00. Also by appointment.

**Textbook:**

*Elementary Number Theory*, by Underwood Dudley.

**Course content:** This is a first course in elementary number theory. Our main goal is to understand the fundamental theorems about prime numbers and divisibility of integers. Although the mathematical prerequisites for the course are few, there will be many proofs done in class, and you will also need to prove results on your own in the homework and provide (simpler) proofs on exams. The core topics covered are divisibility, prime numbers, congruences, the theorems of Fermat, Euler, and Wilson, primitive roots for primes and the law of quadratic reciprocity. Additional topics (not covered in the book) may be discussed in class.

**Homework and Classwork:** Homework will be collected regularly. Assignments and corresponding due dates will be posted on the course web page. Solutions will be collected and graded. Quizzes will be given frequently.

**Tests:** There will be one test and the final. **No make-up tests.**

**Date of the test:** Friday, July 23.

**Date of the final exam:** Friday, August 6, 9:30-11:30, LN 2205.

**Grading Policy:** Grades will be based on a combination of homework, classwork, the test, and the final as follows: homework and classwork 30%, test 30%, final 40%.

**Academic Honesty:** All students are expected to adhere to the Student Academic Honesty Code.

**Final Remarks:** You are responsible for attending class, behaving in class, taking class notes, doing homework problems, asking for and coming in for help, etc.; in the end, you are responsible for your success in this class so work hard! Late arrivals, early

departures, cell phone conversations, eating, or drinking are not appropriate. It is your responsibility to keep informed of all announcements, syllabus adjustments, or policy changes made during scheduled classes. **Both class attendance and systematic work on the homework problems are crucial for the success in this class.**

**All the above information is tentative. I reserve the right to make reasonable changes if I find it necessary.**