

**MATH 430: THEORY OF NUMBERS  
FALL 2022 SYLLABUS**

**Disclaimer:** The syllabus does not constitute a contract. The instructor reserves the right to make changes at his discretion throughout the course.

**General information:**

- **Instructor:** Masoud Zargar  
Office: KAP 406K  
Email: mzargar@usc.edu  
Office hours: Mondays 1PM-2PM
- **Teaching Assistant:** TBD  
Email: TBD
- **Textbook:** David Burton, *Elementary Number Theory, 7th Edition*, ISBN-13: 978-0073383149.
- **Lectures:** 12:00-12:50 MWF, CPA 203.
- **Prerequisites:** Math 126, 127, or 129. This is a proof-based course, and so you should at least be comfortable and have experience with writing proofs. Familiarity with complex numbers is desired, but not expected. I will review some concepts as needed.

**Grading:** Homework 25%, 2 Midterm exams 20% each, Final exam 35%.

**Course description:** This is a course on (elementary) number theory, covering the basic problems with which this subject deals, as well as how it is related to other areas of mathematics. Throughout the course, I will also inspire some abstract mathematics that has been developed to generalize some related classical concepts. We will try to follow the first 9 chapters of the textbook, with some deviations into analytic number theory and very basic abstract algebra.

**Homework:** Homework will be posted most Wednesdays on Blackboard, which will be **due the following Wednesday by the end of class**. Late homework will not be accepted, without exception. You may drop one HW score. Discussions regarding the problems are highly encouraged; however, you *must* write your own solutions.

**Exams:** There will be 2 midterms and 1 final exam with the following dates:

- **Midterm 1:** Friday, Sept. 23, in class.
- **Midterm 2:** Friday, Oct. 28, in class.
- **Final exam:** TBA

If there is a scheduling problem, **I must know two weeks in advance**. A scheduling conflict must be approved and sponsored by USC. The university club or organization must send an official request, with the Dean's approval, to all faculty. Personal activities do not qualify as legitimate reasons. Failure to attend an exam for illegitimate reasons will result in a grade of zero.

**Other Resources:** You may visit the math-center at USC for help from the TAs and instructors available there. Visit <https://dornsife.usc.edu/mathcenter> for up-to-date information.

**Students with disabilities:** If you are requesting academic accommodations regarding a disability, you must register with the Disabilities Services and Programs (DSP) and a letter detailing the necessary accommodations must be addressed to your instructor.