Math 305S: Fall 2019
Number theory

1 Instructor

- Name: Aaron Pollack
- Office: Physics 213
- email: apollack@math.duke.edu
- course website: https://services.math.duke.edu/~apollack/teachingF19.html
- Office hours: Mondays 2:45pm-3:45pm (after lecture), Wednesdays 12:10pm-1:10pm (before lecture), and by appointment. Physics 213.

2 Course information

- Course meeting: Mondays and Wednesdays, 1:25 pm - 2:40 pm, Physics 227
- Prerequisites: 122, 112L, 122L
- Term paper and class presentation required
- Grade also to be based on: homeworks, quizzes, exams.
- Textbook: An introduction to The Theory of Numbers, fifth edition, by Niven, Zuckerman and Montgomery
- Good preparation for math 401 or 501 (although you can take 305S even if you’ve already taken classes in abstract algebra.)
- Course content: see the course website. The goal of this class is not necessarily to cover all the material, but rather to give you a sense for the ideas, techniques, and results of beginning number theory. Consequently, the exact course content is subject to change at the discretion of instructor.

3 Grading

- Term paper and class presentation: 30% and 10%, respectively.
- Important: you will need to meet with me individually at least twice: Once to go over an acceptable topic for term paper, and once to receive feedback on a draft of the paper before the final paper is due.
- Exams: Two midterm exams, 15% each. There will not be a final exam. See the course website for the dates of the exams.
- Homeworks: Weekly, due Wednesday at the beginning of class, unless announced otherwise.
• Quizzes: every now and then, in class, announced at least 1 week prior.

• Combined amount for homeworks and quizzes: 30%

Disclaimer: The percentages above should be taken as rough guidelines; they are not binding in any way. They are only meant to give you a sense of the relative importance of each type of work to your final grade.

4 Homework

The only way to learn the concepts and techniques, and to do well in this course is to work through all of the homework problems. This will ensure that you do not get a false sense of security about if you truly understand the material. However, working with your peers is acceptable. You must write up the solutions to the problems yourself.

• Copying solutions from others or a solutions manual will be deemed academic misconduct. If you worked with peers to solve a problem, you should acknowledge on your homework who you worked with.

• Homework must be written clearly. All work must be shown.

• Please staple your homework.

• Late homework will not be accepted.

5 Administrative policies

• University-excused absences: If you will miss one of the midterms due to religious observation or for representing the university in varsity athletics, you must email me at the above email address no later than two weeks before the absence, but preferably as soon as possible.

• If a student is found responsible through the Office of Student Conduct for academic dishonesty on a graded item in this course, the student will receive a score of zero for that assignment, and instructor reserves the right to further reduce the final grade for the course by up to two letter grades, at the discretion of the instructor. If a students admitted academic dishonesty is resolved directly through a faculty-student resolution agreement approved by the Office of Student Conduct, the terms of that agreement will dictate the grading response to the assignment at issue.

• Please review the university policies regarding the short-term illness notification form, or STINF.