Introduction to Number Theory
MAS 4203
Summer 2020

Instructor:	Corey Stone
Office:	Wherever I have a computer and an internet connection
E-mail:	c.stone@ufl.edu
Office Hours:	TWR, 1:00 pm - 2:00 pm or by appointment
Lecture:	MTWRF, 2:00pm - 3:15pm On Zoom!

Prerequisites MAC 2312, MAC 2512 or MAC 3473 with a minimum grade of C; MAS 3300 or MHF 3202 recommended.

Course Description This course is designed as an introduction to elementary number theory and its applications for Mathematics and Computer Science majors. The basic topics include the greatest common divisor, the fundamental theorem of arithmetic, arithmetic functions, multiplicative functions, congruences, the Chinese remainder theorem, quadratic residues, quadratic reciprocity and primitive roots. We hope to cover some material on cryptography.

Course Goals At the end of this course you should be able to:

1. effectively communicate mathematical ideas
2. write a mathematical proof
3. know and understand basic ideas and applications of number theory

Required Materials There are no required textbooks for this course. I will post the lecture notes I use for each lecture on Canvas after class. However, these lecture notes will be based off of the text *Elementary Number Theory* by Strayer, mainly chapters 1-5. Since this class is being done online, you will need to make sure that you have regular access to the Internet. If that is a concern for you, please let me know as soon as possible!

E-Learning Canvas: I will put homework assignments, lecture notes, announcements and grades on Canvas. Homework and exams will be submitted/taken through Canvas as well.

You are responsible for verifying that your grades are accurate. **You have one week after a score has been posted to contact me if you believe there has been a recording error. There is no grade dispute at the end of the semester.**

Tests There will be two exams throughout the session during class on Friday, July 24 and Friday, August 14.

Online Homework There will be 6 homework asssignments. Homework will generally be assigned on Fridays and due by midnight the following Friday. You are allowed and encouraged to discuss the assignments your classmates on the assignments. However, you are expected to actually write up your solutions on your own. Plagiarized solutions will result in a 0 on that assignment.

Class Attendance Attending each lecture through Zoom is part of the course grade. While I normally wouldn't require it for a class like this, with current events being what they are I don't want to have exams count for an extreme portion of the course grade. If your circumstances are such that you think attendance will be an issue, talk to me ASAP and we can discuss alternative options.

Grading

Attendance: 20%

Homework: 30%

Exam 1: 25%

Exam 2: 25%

Grading Scale

90-100 A	87-90 A-	84-87 B+	80-84 B
77-80 B-	74-77 C+	67-74 C	64-67 C-*
60-64 D+	57-60 D	54-57 D-	0-54 E

NOTE: I will not review disputed points at the end of the semester. All grade concerns must be settled within one week of the return of the paper.

Calculators

Calculators are **NOT** permitted on exams and discussion assignments. Please avoid using a calculator on homework as it will not help you prepare for the exams.

Course Evaluations

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at https://gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at https://gatorevals.aa.ufl.edu/public-results/.

Students with Learning Disabilities

Students requesting class and exam accommodations must first register with the Dean of Students Office Disability Resource Center (DRC), www.dso.ufl.edu/drc/. That office will provide a documentation letter via email to your instructor. This must be done as early as possible in the semester, **at least one week before the first exam**, so there is adequate time to make proper accommodations.

Academic Honesty Guidelines

All students are required to abide by the Academic Honesty Guidelines which have been accepted by the University. The academic community of students and faculty at the University of Florida strives to develop, sustain and protect an environment of honesty, trust, and respect. Students are expected to pursue knowledge with integrity. Exhibiting honesty in academic pursuits and reporting violations of the Academic Honesty Guidelines will encourage others to act with integrity. Violations of the Academic Honesty Guidelines shall result in judicial action and a student being subject to the sanctions in paragraph XIV of the Student Code of Conduct. The conduct set forth hereinafter constitutes a violation of the Academic Honesty Guidelines (University of Florida Rule 6C1-4.017).

The Mathematics Department expects you to follow the Student Honor Code. We are bound by university policy to report any instance of suspected cheating to the proper authorities. You may find the Student Honor Code and read more about student rights and responsibilities concerning academic honesty at the link www.dso.ufl.edu/sccr/.

In addition, we remind you that lectures given in this class are the property of the University/faculty member and may not be taped without prior permission from the instructor and may not be used for any commercial purpose. Students found to be in violation may be subject to discipline under the Student Conduct Code.

Note: Information in this syllabus is subject to change. Any changes will be clearly announced in class or through e-mail.