Math 4400—Fall 2019

Instructor: Harold Blum
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Office: JWB 317
Office Hours: TBA

Class: MWF 10:45AM–11:35AM; BUC 105

Course Description: This course will provide an overview of algebraic number theory and include topics such as prime numbers, factorization, modular arithmetic, RSA encryption, and quadratic reciprocity. Number theory has been studied by mathematicians for centuries and we will approach the topic in a mathematically rigorous way (relying on logic and proof). We will also regularly perform computations and discuss some applications of these topics to cryptography.


Prerequisites: “C” or better in Math 2270 or Math 2250.

Homework: Weekly problem sets will be posted on Canvas and (generally) due on Wednesdays. While you are encouraged to discuss the assignments with other students in the class and with me at office hours, the final write-up should be written on your own.

Grading: Grades in this course will be based on weekly homework (30 %), quizzes (15 %), two mid-term exams (15 % each), and a final exam (25 %). The lowest homework and quiz grades will be dropped.

ADA Statement: The American with Disabilities Act requires that reasonable accommodations be provided for students with physical, sensory, cognitive, systemic, learning, and psychiatric disabilities. Please contact me at the beginning of the semester to discuss any such accommodations for the course.

Safety: The University of Utah values the safety of all campus community members. To report suspicious activity or to request a courtesy escort, call campus police at 801-585-COPS (801-585-2677). You will receive important emergency alerts and safety messages regarding campus safety via text message. For more information regarding safety and to view available training resources, including helpful videos, visit safeu.utah.edu.