

MATH 406 Fall 2018 TuTh 2:00 - 3:15 Room: MTH B0421
Lecturer:

Larry Washington
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Office hours: Monday 10:30am - 11:30am, Thursday 12:40pm - 1:45pm

Course web page: www.math.umd.edu/~lcw/Math406.html

Grading:

Quizzes: 15% There will be a short quiz at the beginning of approximately every third class. One quiz will be dropped.

Graded Homework: 10%

Two midterms: 20% each. The tentative dates for the midterms are October 4 and November 15

Final: 35%. The final exam will be on Saturday, December 15, 10:30am - 12:30pm

Grading will use + and – grades.

Homework problems will be of two types. Approximately three problems in each assignment will be handed in. The remaining problems are not to be handed in, but the problems on the quizzes will come directly from these homework problems.

Text: *An Introduction to Number Theory with Cryptography*, 2nd edition by James S. Kraft and Lawrence C. Washington

The course will cover most of the following chapters:

Chapter 2: Divisibility

Chapter 3: Linear Diophantine Equations

Chapter 4: Unique Factorization

Chapter 5: Applications of Unique Factorization

Chapter 6: Congruences

Chapter 7: Classical Cryptosystems

Chapter 8: Fermat, Euler, and Wilson

Chapter 9: RSA

Chapter 11: Order and Primitive Roots

Chapter 13: Quadratic Reciprocity

Chapter 16: Arithmetic Functions

Chapter 18: The Gaussian Integers

Material from other chapters if there is enough time.