

MATH-184: Introduction to Number Theory

This is an introductory course in Number Theory for students interested in mathematics and the teaching of mathematics. The course begins with the basic notions of integers and sequences, divisibility, and mathematical induction. It also covers standard topics such as Prime Numbers; the Fundamental Theorem of Arithmetic; Euclidean Algorithm; the Diophantine Equations; Congruence Equations and their Applications (e.g. Fermat's Little Theorem); Multiplicative Functions (e.g. Euler's Phi Function); Application to Encryption and Decryption of Text; The Law of Quadratic Reciprocity.

Credits: 3

Program: Mathematics