

The Department of Mathematics

2024–25–A term

Course Name Theory of Numbers

Course Number 201.1.6031

Course web page

<https://www.math.bgu.ac.il/en/teaching/fall2025/courses/theory-of-numbers>

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Office Hours <https://www.math.bgu.ac.il/en/teaching/hours>

Abstract

Requirements and grading¹

Course topics

Number Theory studies the structure of the integers and the natural numbers. In addition to classical topics (prime numbers, congruences, quadratic residues, etc.) there is an emphasis on algorithmic questions and in particular on applications to cryptography.

- Divisibility and prime numbers
- Congruences
- The multiplicative group of \mathbb{Z}/m
- Quadratic residues
- Continued fractions
- Algebraic numbers and algebraic integers

¹Information may change during the first two weeks of the term. Please consult the webpage for updates