

# MATH 675: ANALYTIC THEORY OF NUMBERS

Winter 2024

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<b>Instructor:</b> Sarah Peluse	<b>Time:</b> MW 1:00 PM – 2:30 PM
<b>Email:</b> <a href="mailto:speluse@umich.edu">speluse@umich.edu</a>	<b>Place:</b> EH 2866

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**Office Hours:** Tuesday 2 PM – 3 PM, Wednesday 3 PM – 4 PM, and by appointment

**Course texts:** The following textbooks are optional, but useful, references

- Multiplicative Number Theory, by Davenport
- Multiplicative Number Theory I: Classical Theory, by Montgomery and Vaughan
- Introduction to Analytic and Probabilistic Number Theory, by Tenenbaum
- The Distribution of Prime Numbers, by Koukoulopoulos

**Course description:** This is a first course in analytic number theory focusing on multiplicative number theory and basic sieve theory. Topics covered include the distribution of prime numbers, the anatomy of integers, and the analytic theory of the Riemann zeta function and Dirichlet L-functions.

**Prerequisites:** Math 575 and Math 596 or their equivalents (a course in elementary number theory and a course in complex analysis)

**Grading Policy:** Grades will be determined by scores on the problem sets

**Assignments:** There will be seven problem sets, due by 1 PM on 1/24, 2/7, 2/21, 3/13, 3/27, 4/10, and 4/22.

**Disability statement:** The University of Michigan is committed to providing equal opportunity for participation in all classes, programs, services and activities. Requests for accommodations by persons with disabilities may be made by contacting the Services for Students with Disabilities (SSD) Office located at G664 Haven Hall. The SSD phone number is 734-763-3000. Once your eligibility for an accommodation has been determined you will be issued a verified individual services accommodation (VISA) form. Please present this form to me at the beginning of the term, or at least two weeks prior to the need for the accommodation.