

MATH 392
Elementary Number Theory
Winter 2021

Preface: Due to exceptional circumstances, this course will be taught and all assessments will be done completely ONLINE.

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Office Hours: Mondays & Wednesdays, 15:30-16:15. (ONLINE via Zoom)

Text: *Elementary Number Theory*, 2nd Edition, by Charles Vanden Eynden, Waveland Press.

The textbook will be available at:

<https://www.bkstr.com/concordiastore/home>

Note: Students should order textbooks as early as possible, especially for printed versions in case books are backordered or there are any shipping delays.

Midterm Test: There will be one midterm open book test in week 7-8. It will be held online via Moodle.

Final Exam: At the end of the course, there will be a 3-hour open book final examination which will be held online via Moodle.

Final Grade:	Mid-term test	30%
	Final exam	50%
	Assignments	20%

If the grading scheme for this course includes graded assignments, a reasonable and representative subset of each assignment may be graded. Students will not be told in advance which subset of the assigned problems will be marked and should therefore attempt all assigned problems.

Content:

Topics to be covered:

- Euclidean algorithm, gcd, lcm, primes, fundamental theorems of arithmetic;
- congruences, solving linear congruences, Chinese remainder theorem, higher order congruences;
- quadratic reciprocity;
- factorisation, primality testing;
- diophantine equations.

Academic Integrity and the Academic Code of Conduct

This course is governed by Concordia University's policies on Academic Integrity and the Academic Code of Conduct as set forth in the Undergraduate Calendar and the Graduate Calendar. Students are expected to familiarize themselves with these policies and conduct themselves accordingly. "Concordia University has several resources available to students to better understand and uphold academic integrity. Concordia's website on academic integrity can be found at the following address, which also includes links to each Faculty and the School of Graduate Studies: concordia.ca/students/academic-integrity." [Undergraduate Calendar, Sec 17.10.2]

Behaviour

All individuals participating in courses are expected to be professional and constructive throughout the course, including in their communications.

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