Introductory Number Theory

Course: MATH 3370

Semester: Fall 2021

Instructor: Yorck Sommerhäuser

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Class meetings: Monday, Wednesday, Friday 2:00 pm–2:50 pm, SN 1019

Office hours: Wednesday, Friday 3:15 pm–4:15 pm and by appointment.

Textbook: D. E. Rideout: MATH 3370 Course Manual, 3nd edition, Memorial University, St. John's, 2019 (required resource)

Course description: The course treats primes and perfect numbers, the fundamental theorem of arithmetic, congruences, the Chinese remainder theorem, and the structure of the multiplicative group of the integers modulo m. Time permitting, additional topics will be covered, for example applications of number theory to cryptography.

Coverage: We cover at least the first six chapters of the textbook. Additional chapters will be covered if time permits.

Exams: There will be a midterm exam and a comprehensive final exam. The midterm exam takes place on Wednesday, October 13 during regular class time in the usual classroom. The final exam takes place during the examination period from December 5 to December 14 at a time and in a room determined by the registrar's office.

Homework: Beginning on Monday of the second week, a weekly exercise sheet will be handed out. This has to be submitted in class on the following Monday. There will be no exercise sheet during the week of the midterm exam and no exercise sheets during the last two weeks of the semester. In addition, a reading assignment from the textbook will be given in every lecture.

Policies: Eating, drinking, and smoking is not permitted in the classroom. You are expected to be present at every class meeting, from the beginning to the end. Attendance will be taken and used to make decisions in borderline cases. The use of electronic devices, especially cellphones, calculators, and laptop computers, is not permitted without explicit permission of the instructor. Electronic devices have to be turned off completely.

Memorial University accommodates students with disabilities and demands academic integrity. The corresponding university policies can be found at http://www.mun.ca/policy/site/policy.php?id=239 and in the Academic Calendar in Paragraph 6.12, respectively.

Prerequisite: MATH 2320 (Discrete Mathematics)

Marking weights:

Homework:	25 %
Midterm exam:	25 %
Final exam:	50 %