Introductory Number Theory

Course: MATH 3370

Semester: Fall 2020

Instructor: Yorck Sommerhäuser

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Lectures: On Monday, Wednesday, and Friday, a typoscript of the lecture will be distributed via e-mail.

Summaries: After reading these lecture notes, you need to type a short summary into a free response quiz on the Brightspace site of the course. Although this summary is required, there will be no mark for this summary. The summaries are due on the day where the next lecture is distributed.

Homework: Beginning Monday of the second week, a weekly exercise sheet will be be distributed via e-mail. This has to be submitted on the following Monday via e-mail.

Examinations: There will be no examinations.

Final mark: The final mark will be based entirely on the score of the exercise sheets.

Course description: The course covers 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, Pythagorean triples, Fermat's last theorem, and Gaussian integers.

Office hours: Monday, Thursday 11:00 am-12:00 m and by appointment (beginning in the second week of classes).

Prerequisite: MATH 2320 (Discrete Mathematics)

Policies: 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.