

## Concepts of Modern Mathematics I, MATH 1351

**Meeting Times:** 11:15-12:10 am MWF in RBS 2019

**Last day to withdraw:** Monday, October 30, 2023

**Instructor:** Nathan Smith

**Office:** RBN 4007

**Contact:** nsmith@uttyler.edu

**Office Hours:** Tentatively 10:10 - 11:05 MWF, with other times available by appointment.

**Text:** We'll be using free online resources rather than purchasing a textbook.

**Course Topics:** Sets and number systems, computation, basic number theory, integers, rational numbers, real numbers, decimal representations, and proportional reasoning.

We will be looking down, as adults and prospective educators, at much of the mathematics taught from grades K-8 according to the Texas Essential Knowledge and Skills standards. Being able to “do the math” is not the only skill needed for effective instruction.

**Student Learning Outcomes:** By the end of the course students should be able to:

1. Demonstrate a proficient conceptual understanding of arithmetic, algebraic, and proportional reasoning.
2. Analyze and solve problems involving topics from elementary number theory, including divisibility, primality, GCD, and LCM.
3. Use different models and algorithms for performing and describing arithmetic operations with whole numbers, integers, rational numbers, and decimal numbers.
4. Solve and explain problems involving proportional reasoning.
5. Analyze and troubleshoot samples of student work, being able to give proper feedback.

### Grading:

- Test1:  $\frac{1}{4}$  of your semester grade. (late September-ish)
- Test2:  $\frac{1}{4}$  of your semester grade. (late November-ish)
- Comprehensive Final Exam:  $\frac{1}{4}$  of your semester grade. (Monday, December 4, 10:15-12:15)
- Quizzes, HW, and Class assignments:  $\frac{1}{4}$  of your semester grade.

**Missed work:** It is not expected that you will miss a test. If an emergency situation or university-sanctioned event forces your absence on the day of the test and if you have discussed the situation in advance with the instructor, your final exam grade will be used to replace your test. Because much of the learning in this class revolves around discovery learning activities undertaken during the class time, attendance is extremely important. I am not responsible enough to handle late work (getting it on the same pile as other papers from the same assignment, grading it, recording the grade, etc.).

We will have quizzes weekly, excepting possibly the weeks in which an exam is scheduled. Excepting unusual circumstances such as a university-sanctioned event, make-up quizzes will not be given. At the end of the semester when calculating your grade I not use your lowest two quiz grades when computing your average.

**Student Academic Conduct:** It is your responsibility to learn the material in this course for your own benefit. You should not let this discourage you from working together on your homework but in the end what you turn in should reflect your understanding, not just be copied from someone else. *During the tests, a code of honor will apply under which students are to work alone and neither give help to others nor receive help from any sources.* Students are also expected to help enforce this code. Students are encouraged to obtain a copy of *A Student Guide to Conduct and Discipline at UT Tyler*, available in the Office of Student Affairs.

**University Policies:** For University policies concerning Students' Rights and Responsibilities, Grade Replacement/Forgiveness, State-Mandated Course Drop Policy, Disability Services, Student Absence due to Religious Observance, Student Absence for University-Sponsored Events and Activities, and the Social Security and FERPA Statement please see: <http://www.uttyler.edu/academicaffairs/files/syllabuspolicy.pdf>.