

Number Theory

Math 4453.201

Fall 2026

MWF 9am-9:50am

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Text: There will not be a required textbook for this course. I will be handing out notes as we proceed through the class. The library has a number of Elementary Number Theory books, feel free to check out any of them for the semester.

Credit Hours: 3 undergraduate hours

Material covered: The notes that I will be handing out during the semester will cover what we talked about in class. There will be several exercise sets that are designed to give you a deeper grasp of the concepts. You will be asked to work through those and hand your solutions to each exercise. There are multiple reference on-line to give you an alternative presentation of this material. One quick way to look at those is to use your favorite search engine and type "elementary number theory pdf" this will give you several open source material for further edification.

Exams: There will be 3 exams during the semester, each covering the material previously presented in class. Each exam will be worth 100 points. Each exam will be announced at least a week ahead of time.

Homework/Quizzes/Activities: During the semester you will be asked to hand in some homework these will be graded. From time to time I may also give quizzes and class activities may come up. All the homework/quizzes/activities will constitute 100 points in your final grade calculation.

Final Exam: The final exam will be the 3rd exam and will be given on the date listed in the final exam schedule. This exam will be worth 100 points. The final exam will be given on Monday, Dec 7, from 1pm-3pm.

Grade calculation: Your grade will be based on the total number of points you accumulate during the semester.

Exams	200 points	Total points	Letter Grade
Homework	100 points	400-360	A
<u>Final</u>	<u>100 points</u>	359-320	B
		319-280	C
Total	400 points	279-240	D
		Below 240	F

Attendance Policy: Attendance at all classes is expected.

Students should refer to the current MSU Student Handbook and Activities Calendar for university policies on academic dishonesty, class attendance, student rights and activities.

Course Description:

Divisors and prime numbers; congruences; primitive roots; quadratic residues; continued fractions; elliptic curves; cryptography

Assessment of Core Objectives:

Samples of students' work from embedded final exam questions will be used in the assessment of critical thinking, communications skills and empirical and quantitative skills.

Recording Classes

**Recording classes is generally prohibited without the professor's explicit permission.* Such recordings, when permitted, are for personal use only and may not be uploaded to the internet or otherwise shared, transmitted, or published without the professor's prior consent. Some faculty may not permit recordings of their classes. When it is feasible and appropriate, students may record classes to accommodate disabilities under the Americans With Disabilities Act, with prior approval of Disability Support Services. Such recordings may not be uploaded to the internet or otherwise shared, transmitted, or published.

Emergency Aid Resources for Basic Needs

Unexpected life circumstances can affect anyone. If you are experiencing challenges meeting basic needs—such as housing, utilities, food, transportation, healthcare, technology, textbooks or other life necessities, resources may be available to help. Visit the [Student Emergency Support and Resources webpage](#) to learn more, and explore emergency support opportunities through MSU and how to access them. For additional information, please contact the Office of Student Affairs: Clark Student Center #108, (940) 397-7500, student.affairs@mstuexas.edu.

Senate Bill 11 passed by the 84th Texas Legislature allows licensed handgun holders to carry concealed handguns on campus, effective August 1, 2016. Areas excluded from concealed carry are appropriately marked, in accordance with state law. For more information regarding campus carry, please refer to the University's webpage at <http://mwsu.edu/campus-carry/rules-policies>.