

Syllabus
Math 2033-101: Structure of the Number System
Fall 2025

Section Information

Instructor Information

Instructor: Dr. Sarah Cobb (she/her)

Office: Bolin Hall 122D

Office phone: (940) 397-4441

E-mail: sarah.cobb@msutexas.edu

Drop-in Office hours:

- Monday: 11:00 – 11:50 AM, 3:00-3:50 PM
- Tuesday: 1:00 – 1:50 PM
- Wednesday: 3:00 – 3:50 PM
- Friday: 11:00 – 11:50 AM

Office hours also available by appointment

Schedule

Class meetings: MWF, 1:00-1:50 PM, Bolin Hall 143

Unit Exams:

- Wednesday, September 17 in class
- Wednesday, October 8 in class
- Wednesday, October 29 in class
- Wednesday, November 19 in class

Final Exam: Monday, December 8 1:00—3:00 PM, BO 143

Catalog information

Course Description

Patterns and sequences, sets, the structure of various numeration systems, the four fundamental operations of arithmetic, integers, rational numbers, and elementary number theory. This course stresses conceptual understanding of mathematics through concrete examples, models, multiple representations of ideas and concepts, and processes of mathematical reasoning.

Prerequisites

MATH 1233 with a grade of C or better.

Course Materials

Textbook

Mathematics for Elementary School Teachers, Ricardo D. Fierro, ISBN 9781133712107

The textbook is a useful reference, and some homework problems will be taken from the textbook. You can use a digital or print copy, whichever is more convenient. You may be able to share with a classmate, but you are responsible for having access to the material in the textbook when needed.

Calculators

Calculators will be allowed on certain tests and quizzes; you should have a calculator and know how to use it. A simple calculator is sufficient for this class: it should be able to add, subtract, multiply, divide, and take square roots.

Some tests and quizzes will need to be done without a calculator.

Coursework and Grading

Grading

Your course grade will be computed based on the following categories:

Category	Points
Homework, quizzes, class activities, and other items	20%
Unit exams (4)	50%
Final exam	15%
Project	10%
Final Reflection	5%

Your final letter grade will be based on the percentage earned. The table below shows the percentage needed to earn each letter grade.

Grade	Percentage
A	At least 90%
B	At least 80%
C	At least 70%
D	At least 60%
F	Less than 60%

Homework

Homework will be assigned regularly during this class and generally posted on D2L. This may include problems from the textbook and problems taken from other sources or created by the instructor. The assignments will generally have a small number of problems, but each problem will be somewhat involved. Each assignment will be graded for clarity of communication and accuracy of process as well as for correct answers.

Quizzes

Quizzes will be given in class about once per week; some may be online through D2L and taken outside of class time. A major purpose of quizzes is to make sure that you know where you stand in preparing for exams. After a quiz, you should use your score and feedback to direct your study for the exam over that material.

Quizzes will generally be announced several days ahead of time, but unannounced quizzes may also be given.

Class Activities

Some days in class will be spent on group work, which may or may not be graded. This will generally be unannounced—you are expected to attend class every day.

Dropped Scores

Homework, quizzes, and class activities will all be combined into one grade category, accounting for 20% of your grade. You should expect 20-30 items in this category by the end of the semester. The lowest four scores will be dropped from the grade calculation. These dropped scores are intended to provide flexibility in case of sickness, accident, or emergency—you will not be allowed to turn in assignments late or make up quizzes or class activities based on individual circumstances. If an illness, accident, or other extreme situation causes you to miss a significant amount of class, please let me know and I will work with you on a plan to stay caught up on course material.

Exams

This course will have four unit exams and a comprehensive final exam. The unit exams will be on September 17, October 8, October 29, and November 19 during class time.

If you must miss an exam, please notify me by email at least one week ahead of the test date and arrange to take the test early. In the case of unexpected and unavoidable absences (such as hospitalization), you must let me know on the day of the test, and documentation may be required. At the instructor's discretion a missed exam may be made up, dropped from the final grade, replaced with your grade on the final exam, or counted as a zero. Clear and prompt communication is essential in the case of absence.

The final exam for this course is Monday, December 8, 1:00-3:00 PM. It cannot be taken early or late for anything except an emergency. Please consult the finals schedule before planning end-of-semester travel, as scheduled travel is not an emergency and you will not be able to reschedule the exam.

Project

This course will include a project worth 10% of your final grade that will require you to interact with mathematical content independently and creatively. Details and due dates will be available on D2L in the second half of the semester.

Final Reflection

Your final reflection will consist of several short essay questions (a paragraph or two) asking you to reflect on your experiences in this class and with mathematics in general. It will be due at 11:59 PM on Thursday, April 11. The questions will be provided at least one week ahead of the due date.

Course Policies

Attendance

Attendance in class is essential for your learning and is therefore required. You are expected to attend every class, in person, if at all possible. This includes arriving on time; staying to the end; being prepared; participating in class; and behaving respectfully. Your attendance and participation grade are based on meeting these expectations. If you must miss class, please consult a classmate to find out what you missed.

At the instructor's discretion, students who miss more than six classes or portions of classes for reasons other than university-excused absences may be dropped from the course with a grade of F.

This policy is intended to be flexible enough to allow for minor illness, emergencies for those close to you, transportation difficulties, and other necessary absences. I do not generally distinguish between excused and unexcused absences, since it is not my role to decide the relative importance of competing priorities in your life; attending class should be a high priority, but it isn't (and shouldn't be) your only priority. If there are circumstances that cause you to miss a significant amount of class, please communicate promptly with me about it and I will work with you on a plan to stay caught up on course material and remain enrolled in the class.

Learning Environment

I am committed to providing an environment that promotes learning for all students. It is important to me that this class is a welcoming, inclusive, and accessible space for all students. I am available and willing to address your issues and concerns as they arise.

Much of the learning in this class will involve interaction with your peers. In order for that to be effective, we must all conduct ourselves with respect, generosity, and openness.

Classroom Behavior

Respectful behavior in the classroom is required. Any student who is disruptive will be asked to leave class. As much as possible, please avoid leaving or entering the room during class. Make sure all electronic devices are silenced and put away. Use of cell phones in class is not allowed.

Electronic Devices

Use of computers is not allowed in the classroom. This includes laptops, cell phones, tablets, and other similar devices. Students using such devices may be asked to leave class. (Calculators are generally allowed.) If a cell phone or similar device is visible or audible during an exam, you may receive a zero on that exam.

If this policy presents a serious problem, please let me know; exceptions may be made in special circumstances, particularly in the case of disability.

Changes

Some portions of this syllabus may alter during the semester. When possible, I will announce changes in class, post an announcement on D2L, and send an email to your official MSU address. You are responsible for knowing everything I announce in class as well as everything I email to your official university email address. If you miss class, make sure you talk to someone who was there.

Academic Misconduct

Any incident in which a student submits work for grading that does not reflect their own effort is considered academic dishonesty. This includes using sources (by paraphrase or direct quotation) without proper attribution; collaborating on work where collaboration is not authorized; use of sources on an assignment or test where those sources are not authorized; and turning in work completed by another person.

Cheating on any work in this course will result in no credit for that work. Egregious or repeated incidents will result in more serious consequences, such as a failing grade in the course or dismissal from your academic program. All incidents of academic misconduct will be reported as specified in your student handbook.

You are permitted (and encouraged) to collaborate with classmates on in-class and out-of-class work and to study in groups for exams. Collaboration on exams or in-class quizzes is not allowed unless explicitly stated. During an exam, no items or information may be shared between students.

Student Handbook

Make sure you are familiar with university policies as described in the [student handbook](#). This course will abide by all university policies.

Desire-to-Learn (D2L)

Extensive use of the MSU D2L program is a part of this course. Each student is expected to be familiar with this program and to regularly check posted information. D2L provides a primary source of communication regarding assignments, examination materials, and general course information. You can log into [D2L](#) through the MSU Homepage. Downloading the Brightspace Pulse app is also recommended. If you experience difficulties, please contact the technicians listed for the program or contact your instructor.

Office Hours

Office hours are time that I have set aside to answer questions about the course or course material. You are welcome to drop in during the scheduled office hours, and you do not need an appointment. I am happy to answer questions about homework problems, quizzes and tests, study practices, grades, and other topics. These are intended to be a resource for you, and talking to me during office hours is a good first step if you find yourself struggling.

If you are unable to attend scheduled office hours, you can email me (sarah.cobb@msutexas.edu) to set up an appointment at another time. In your email, please include your first and last name and some times that you'd be available. I am also willing to schedule virtual office hours, but it is more difficult to clearly communicate math remotely.

Communicating with Me

The best way to reach me is by email (sarah.cobb@msutexas.edu). I will generally respond to email within 24 to 48 hours. I will be in my office during office hours each week and often at other times; feel free to stop by. Any communication not in writing or by email should be considered unofficial.

Services for Students With Disabilities

MSU is committed to providing reasonable accommodations to allow students with disabilities to participate fully in its academic and campus life. Any student who may require special arrangements in order to meet the course requirements should contact me as soon as possible to make necessary arrangements. Students must present appropriate verification provided by Disability Support Services. The best time to present this documentation in private is during office hours. Please note that instructors are not allowed to provide classroom accommodation to a student until appropriate verification from Student Disability Services has been provided. For additional information, please contact Disability Support Services located in Clark Student Center, Room 168 or call 940-397-4140.

University Closure

If any class period is missed because of a university closure, the schedule will be adjusted to cover that content at a later time. Watch D2L and your official MSU email account for information. No online classes or makeup classes will be required unless the closure is for an extended time. You are encouraged to spend the extra time working through some exercises from a section you found challenging.