

# Math 3308

## Survey of Basic Math Theory I

Sul Ross State University  
Rio Grande College.  
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Office Hours  
M: 9:00-10:00 AM  
T: 12:00-2:00 PM  
W: 9:00-10:00 AM  
Th: 12:00-4:00 PM  
F: 9:00 AM-1:00 PM

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**Catalog description:** Sets and Whole Numbers, Numeration Systems, Number Theory and Integers.

**Pre-requisites, co-requisites, and other requirements:** College Algebra

Required: Mathematical Reasoning for Elementary Teachers - Media Update 7th Edition  
Author(s): Long, Calvin | DeTemple, Duane | Millman, Richard  
Textbook ISBN-13: 9780134758824

Course ID: **davis35443**

### CHAPTER 1-THINKING CRITICALLY

- 1.2 Polya's Problem-Solving Principles
- 1.3 More Problem-Solving Strategies
- 1.5 Additional Problem-Solving Strategies
- 1.6 Reasoning Mathematically

### CHAPTER 2 – SET AND WHOLE NUMBERS

- 2.1 Sets and Operations on Sets
- 2.2 Sets, Counting and the Whole Numbers
- 2.3 Addition and Subtraction of Whole Numbers
- 2.4 Multiplication and Division of Whole Numbers

### CHAPTER 3 – NUMERATION AND COMPUTATION

- 3.1 Numeration Systems Past and Present
- 3.2 Algorithms for Addition and Subtraction of Whole Numbers
- 3.3 Algorithms for Multiplication and Division of Whole Numbers
- 3.4 Mental Arithmetic and Estimation
- 3.5 Nondecimal Positional Systems

### CHAPTER 4 –NUMBER THEORY

- 4.1 Divisibility of Natural Numbers
- 4.2 Tests for Divisibility
- 4.3 Greatest Common Divisors and Least Common Multiples

### CHAPTER 5 – INTEGERS

- 5.1 Representations of Integers
- 5.2 Addition and Subtraction of Integers
- 5.3 Multiplication of Integers

### CHAPTER 6 – FRACTIONS AND RATIONAL NUMBERS

- 6.1 The Basic Concepts of Fractions and Rational Numbers
- 6.2 Addition and Subtraction of Fractions
- 6.3 Multiplication and Division of Fractions
- 6.4 The Rational Number System

## Course requirements and policies:

### A. Grade Requirements

Grading Procedure:	2 Tests 2 Homework Stes Final Exam	100 points each 100 points each 100 points
Schedule	Test 1 (Chapters 1, 2 and 3) Test 2 (Chapters 4, 5, and 6) Final Exam	March 7 April 27 TBD
Make-up Policy:	Makeup exams will be granted only in cases of medical and legal obligations. Student must provide a medical or legal document. It is at the discretion of the instructor whether to grant the request.	
Final Exam	The final exam is comprehensive.	
Homework	The homework grade is based on the Mymathlab homework score.	
Extra Credit	There will be an extra credit opportunity for each test but not the Final Exam. The Extra Credit Policy is posted on Blackboard.	
Grade Determination:	<u>Total Points</u> 450-500 400-449 350-399 300-349 0-299	<u>Letter Grade</u> A B C D F

### B. Policies:

**Technology Requirement:** Calculators can be used in class and on all homework assignments. But calculators will not be allowed on the tests or the final exam.

ADA Statement: "As per Section 504 of the Vocational Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, if accommodation is needed notify me as soon as possible. Sul Ross State University is committed to equal access in compliance with the Americans with Disabilities Act of 1973. It is the student's responsibility to initiate a request for accessibility services. Students seeking accessibility services must contact Mary Schwartz, M. Ed., L.P.C., in Counseling and Accessibility Services, Ferguson Hall, Room 112. The mailing address is P.O. Box C-122, Sul Ross State University, Alpine, Texas 79832. Telephone: 432-837-8691. E-mail: mschwartz@sulross.edu .

**Academic Dishonesty:** Students may be subject to disciplinary proceedings resulting in an academic penalty or disciplinary penalty for academic dishonesty. Academic Dishonesty includes, but is not limited to, cheating on a test, plagiarism and collusion.

**Electronic Devices:** Students are required to silence all electronic devices (cellular phones, etc.) when in classrooms, laboratories and the library.

**Attendance:** A student absent for any reason is responsible for all work missed.

**PowerPoint Lecture Notes:** PowerPoint Lecture notes will be made available through Blackboard. A copy of the syllabus is also available via Blackboard.

### C. Student Learning Outcomes

1. Student Learning Outcomes- See Department of Education outcomes- The preservice teacher understands how students learn mathematical skills and uses that knowledge to plan, organize and implement instruction and assess learning. The preservice teacher understands concepts related to numbers, operations and algorithms and the properties of numbers. The preservice teacher understands concepts related to patterns, relations, functions and algebraic reasoning. The preservice teacher understands concepts and principles of geometry and measurement. The preservice teacher understands concepts related to probability and statistics and their applications. The preservice teacher understands mathematical processes and knows how to reason mathematically, solve mathematical problems and make mathematical connections within and outside of mathematics.
2. Course Competencies—See TExES Competencies for Math EC-6 on the following pages
3. ADA Statement SRSU Disability Services. Sul Ross State University (SRSU) is committed to equal access in compliance with Americans with Disabilities Act of 1973. It is SRSU policy to provide reasonable accommodations to students with documented disabilities. It is the student's responsibility to initiate a request each semester for each class. RGC students seeking accessibility services should contact Paulette Harris, Executive Assistant to the Vice President and Dean, at 830-279-3023 or email [pharris@sulross.edu](mailto:pharris@sulross.edu). Ms. Harris's office is at 2623 Garner Field Road, Uvalde, TX 78801 (this is the mailing address, too).
4. Library Information The Southwest Texas Junior College (SWTJC) Libraries at Uvalde, Del Rio, and Eagle Pass offer additional access to library spaces and resources. Del Rio, Eagle Pass, and Uvalde students may also use online resources available through SWTJC website, [library.swtjc.edu](http://library.swtjc.edu). The SWTJC Libraries serve as pick-up locations for InterLibrary Loan (ILL) and Document Delivery from the Alpine campus. The Bryan Wildenthal Memorial Library in Alpine offers FREE resources and services to the entire SRSU community. Access and borrow books, articles, and more by visiting the library's website, [library.sulross.edu](http://library.sulross.edu). Off-campus access requires logging in with your Lobold and password. Librarians are a tremendous resource for your coursework and can be reached in person, by email ([srsulibrary@sulross.edu](mailto:srsulibrary@sulross.edu)), or phone (432-837-8123).
5. SRSU Distance Education Statement
6. Students enrolled in distance education courses have equal access to the university's academic support services, such as library resources, online databases, and instructional technology support. For more information about accessing these resources, visit the SRSU website. Students should correspond using Sul Ross email accounts and submit online assignments through Blackboard, which requires secure login. Students enrolled in distance education courses at Sul Ross are expected to adhere to all policies pertaining to academic honesty and appropriate student conduct, as described in the student handbook. Students in web-based courses must maintain appropriate equipment and software, according to the needs and requirements of the

- course, as outlined on the SRSU website. Directions for filing a student complaint are located in the student handbook.
7. Academic Integrity
  8. Students in this class are expected to demonstrate scholarly behavior and academic honesty in the use of intellectual property. A scholar is expected to be punctual, prepared, and focused; meaningful and pertinent participation is appreciated. Examples of academic dishonesty include but are not limited to: Turning in work as original that was used in whole or part for another course and/or professor; turning in another person's work as one's own; copying from professional works or internet sites without citation; collaborating on a course assignment, examination, or quiz when collaboration is forbidden.
  9. Classroom Climate of Respect
  10. Importantly, this class will foster free expression, critical investigation, and the open discussion of ideas. This means that all of us must help create and sustain an atmosphere of tolerance, civility, and respect for the viewpoints of others. Similarly, we must all learn how to probe, oppose and disagree without resorting to tactics of intimidation, harassment, or personal attack. No one is entitled to harass, belittle, or discriminate against another on the basis of race, religion, ethnicity, age, gender, national origin, or sexual preference. Still we will not be silenced by the difficulty of fruitfully discussing politically sensitive issues.
  11. Diversity Statement
  12. I aim to create a learning environment for my students that supports a diversity of thoughts, perspectives and experiences, and honors your identities (including race, gender, class, sexuality, religion, ability, socioeconomic class, age, nationality, etc.). I also understand that the crisis of COVID, economic disparity, and health concerns, or even unexpected life events could impact the conditions necessary for you to succeed. My commitment is to be there for you and help you meet the learning objectives of this course. I do this to demonstrate my commitment to you and to the mission of Sul Ross State University to create an inclusive environment and care for the whole student as part of the Sul Ross Familia. If you feel like your performance in the class is being impacted by your experiences outside of class, please don't hesitate to come and talk with me. I want to be a resource for you.