

**College Algebra**

Time: MWF 9 – 9:50

Room: ACR 204

Instructor: Eric Funasaki

Offices: ACR 109C (MWF mornings) and BAB 210 (MWF afternoons and TR all day)

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**Office hours:**

MWF 8 – 8:50, MWF 11 – 11:50, or by appointment.

**Textbook:**

*College Algebra*, 3<sup>rd</sup> edition, by Paul Sisson.

ISBN: 978-1-64277-173-2 Software and eBook

978-1-64277-283-8 Software, eBook, and Textbook

**Course Description:**

In-depth study and applications of polynomial, rational, radical, exponential, and logarithmic functions and systems of equations using matrices. Additional topics such as sequences, series, probability, and conics may be added.

**Course Objectives:**

The student will be able to:

1. Identify and work with functions and their graphs;
2. Find the zeros of polynomial functions;
3. Recognize and manipulate exponential and logarithmic functions;
4. Solve systems of linear equations; and
5. Use matrices and vectors in simple problems.

**Mathematics Program Learning Objectives:**

The student should be able to:

1. Apply knowledge of basic mathematics principles;
2. Identify and provide valid proofs or solutions for theorems or problems; and
3. Recognize and dispute invalid mathematical statements using counterexamples.

## Course Assessment:

Your grade will be based on the following components:

- 10% In-class problems and participation
- 24% Homework assignments and quizzes
- 48% Exams
- 18% Final Exam

The grading scale will be:

90 – 100 A      80 – 89 B      70 – 79 C      60 – 69 D      0 – 59 F

## Course Schedule (tentative):

### Week 1

- 8/22 M 1.1 Real Numbers, 1.8 Complex Numbers
- 8/24 W 1.8 Complex Numbers, 2.1 Linear Equations in One Variable
- 8/26 F 2.1 Linear Equations in One Variable, 2.3 Quadratic Equations in One Variable

### Week 2

- 8/29 M 2.3 Quadratic Equations in One Variable
- 8/31 W 2.3 Quadratic Equations in One Variable, 3.1 The Cartesian Coordinate System
- 9/2 F 3.1 The Cartesian Coordinate System, 3.3 Linear Equations in Two Variables

### Week 3

- 9/5 M **Labor Day (no class)**
- 9/7 W 3.3 Linear Equations in Two Variables, 3.4 Forms of Linear Equations
- 9/9 F 4.1 Relations and Functions

### Week 4

- 9/12 M 4.2 Linear Functions
- 9/14 W 4.3 Quadratic Functions
- 9/16 F Review for Exam 1

### Week 5

- 9/19 M **Exam 1**
- 9/21 W 6.1 Polynomial Equations and Polynomial Inequalities
- 9/23 F 6.1 Polynomial Equations and Polynomial Inequalities

### Week 6

- 9/26 M 6.2 Polynomial Division and the Division Algorithm
- 9/28 W 6.2 Polynomial Division and the Division Algorithm,
- 9/30 F 6.3 Locating Real Zeros of Polynomials

### Week 7

- 10/3 M 6.3 Locating Real Zeros of Polynomials
- 10/5 W 6.3 Locating Real Zeros of Polynomials
- 10/7 F 6.4 The Fundamental Theorem of Algebra

### Week 8

10/10	M	6.4 The Fundamental Theorem of Algebra
10/12	W	6.4 The Fundamental Theorem of Algebra
10/14	F	Review for Exam 2

### Week 9

<b>10/17</b>	<b>M</b>	<b>Exam 2</b>
10/19	W	5.3 Combining Functions, 5.4 Inverses of Functions
10/21	F	5.3 Combining Functions, 5.4 Inverses of Functions, 7.1 Exponential Functions and Their Graphs

### Week 10

10/24	M	7.1 Exponential Functions and Their Graphs
10/26	W	7.3 Logarithmic Functions and Their Graphs
10/28	F	7.3 Logarithmic Functions and Their Graphs, 7.4 Logarithmic Properties and Models

### Week 11

10/31	M	7.4 Logarithmic Properties and Models
11/2	W	7.4 Logarithmic Properties and Models
11/4	F	7.5 Exponential and Logarithmic Equations

### Week 12

11/7	M	7.5 Exponential and Logarithmic Equations
11/9	W	7.5 Exponential and Logarithmic Equations
<b>11/11</b>	<b>F</b>	<b>Veterans Day (no class)</b>

### Week 13

11/14	M	Review for Exam 3
<b>11/16</b>	<b>W</b>	<b>Exam 3</b>
11/18	F	7.2 Exponential Models, 7.4 Logarithmic Properties and Models

### Week 14

11/21	M	9.1 Solving Systems by Substitution and Elimination
<b>11/23</b>	<b>W</b>	<b>Thanksgiving (no class)</b>
<b>11/25</b>	<b>F</b>	<b>Thanksgiving (no class)</b>

### Week 15

11/28	M	9.2 Matrix Notation and Gauss-Jordan Elimination
11/30	W	Review for Final Exam

### Week 16

<b>12/6</b>	<b>T</b>	<b>Final Exam (8 am – 10 am)</b>
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**Attendance Policy:**

Role will be taken. You are responsible for all material covered in class as well as any assignments and announcements that are made. If you miss an assignment, exam, or quiz you will receive a grade of zero unless I have been notified in advance.

Sul Ross State University policy allows an instructor to drop a student with a grade of W or F when 9 hours of class are missed. For this course that is when you miss **9** classes.

**Cheating:**

Cheating will not be tolerated. Anyone caught cheating will receive a grade of zero on that assignment. This includes homework assignments where the student who copied another student's work and the student who allowed their work to be copied will both receive a grade of zero.

**Cell Phones and Other Electronic Devices:**

Your cell phone must be **off** while you are in class. You may not read or send text messages while class is in session. If there is an unusual situation where you simply must be able to read and send a message without delay, place your phone in vibrate mode and leave the room before reading and responding. No other electronic devices may be used during class without the permission on the instructor.

**ADA Statement:**

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. Alpine students seeking accessibility/accommodations services must contact Mary Schwartze Grisham, M.Ed., LPC, SRSU's Accessibility Services Coordinator at 432-837-8203 (please leave a message and we'll get back to you as soon as we can during working hours), or email [mschwartz@sulross.edu](mailto:mschwartz@sulross.edu). Our office is located on the first floor of Ferguson Hall (Suite 112) and our mailing address is P.O. Box C-122, Sul Ross State University, Alpine, Texas 79832.

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