MATH 1314 002 **Spring 2017**

College Algebra

Time: MWF 11 – 11:50
Room: ACR 204

Instructor: Eric Funasaki
Office: ACR 109C
Phone: 432-837-8109
e-mail: eric.funasaki@sulross.edu

Office Hours:

MWF 10 – 10:50, TR 8:30 – 9:20, TR 11 – 12:15, or by appointment.

Textbook:

College Algebra, 6th edition, Robert Blitzer.
ISBN: 978-0-321-78228-1 (hardcover)
978-0-321-78229-8 (loose-leaf)
978-0-321-87910-3 (e-text)

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.

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 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.

EC-6 Core Teacher Competencies:

1. Competency 013 (Mathematics Instruction): The teacher understands how students learn mathematical skills and uses that knowledge to plan, organize, and implement instruction and assess learning.
2. Competency 014 (Number Concepts and Operation): The teacher understands concepts related to numbers, operations and algorithms, and the properties of numbers.
3. Competency 015 (Patterns and Algebra): The teacher understands concepts related to patterns, relations, functions, and algebraic reasoning.

4. Competency 016 (Geometry and Measurement): The teacher understands concepts related to principles of geometry and measurement.
5. Competency 017 (Probability and Statistics): The teacher understands concepts related to probability and statistics and their applications.
6. Competency 018 (Mathematical Processes): The teacher understands mathematical processes and knows how to reason mathematically, solve mathematical problems, and make mathematical connections within and outside of mathematics.

Course Assessment:

Your grade will be based on the following components:

10%	In-class problems and participation
20%	Homework assignments and quizzes
48%	Exams
22%	Comprehensive 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):

<u>Week 1</u>

1/18	W	1.1 Graphs
1/20	F	2.1 Basics of Functions and Their Graphs

<u>Week 2</u>

1/23	M	2.1 Basics of Functions and Their Graphs
1/25	W	2.2 More on Functions and Their Graphs
1/27	F	2.2 More on Functions and Their Graphs

<u>Week 3</u>

1/30	M	2.2 More on Functions and Their Graphs
2/1	W	P.4 Polynomials
2/3	F	Review for Exam 1

<u>Week 4</u>

2/6	**M**	**Exam 1**
2/8	W	1.4 Complex Numbers
2/10	F	1.5 Quadratic Equations

<u>Week 5</u>

2/13	M	3.1 Quadratic Functions
2/15	W	3.1 Quadratic Functions
2/17	F	3.2 Polynomial Functions and Their Graphs

<u>Week 6</u>

2/20	M	3.2 Polynomial Functions and Their Graphs
2/22	W	3.3 Dividing Polynomials
2/24	F	3.4 Zeros of Polynomial Functions

<u>Week 7</u>

2/27	M	3.4 Zeros of Polynomial Functions
3/1	W	3.4 Zeros of Polynomial Functions
3/3	F	Review for Exam 2

Week 8

3/6	**M**	**Exam 2**
3/8	W	2.6 Composite Functions
3/10	F	2.6 Composite Functions, 2.7 Inverse Functions

Week 9

3/13	M	Spring Break (no class)
3/15	W	Spring Break (no class)
3/17	F	Spring Break (no class)

Week 10

3/20	M	2.7 Inverse Functions
3/22	W	4.1 Exponential Functions
3/24	F	4.1 Exponential Functions

Week 11

3/27	M	4.2 Logarithmic Functions
3/29	W	4.2 Logarithmic Functions
3/31	F	4.3 Properties of Logarithms

Week 12

4/3	M	4.3 Properties of Logarithms
4/5	W	4.3 Properties of Logarithms
4/7	F	4.4 Exponential and Logarithmic Equations

Week 13

4/10	M	4.4 Exponential and Logarithmic Equations
4/12	W	4.4 Exponential and Logarithmic Equations
4/14	F	Good Friday (no class)

Week 14

4/17	M	4.5 Exponential Growth and Decay
4/19	W	Linear Systems
4/21	F	Review for Exam 3

Week 15

4/24	**M**	**Exam 3**
4/26	W	Linear Systems
4/28	F	Linear Systems

Week 16

5/1	M	Linear Systems
5/3	W	Review for Final Exam
5/5	F	Dead Day (no class)

Week 17

5/9	**T**	**Final Exam (10:15 am – 12:15 pm)**

Attendance:

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 the instructor has been notified in advance.

Sul Ross State University policy is 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, exam, or quiz. 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.

Homework Assignments:

A homework assignment is due **2** class periods after it is assigned. A late homework assignment will be penalized at least 50% or not accepted.

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, please 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 of the instructor.

ADA Statement:

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 Schwartze, 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, TX 79832. Telephone: 432-837-8691. E-mail: mschwartze@sulross.edu.

Department of Computer Science and Mathematics
Sul Ross State University
P.O. Box C-18
Alpine, TX 79832