College Algebra

Time: TR 9:30 – 10:45
Room: ACR 204

Instructor: Eric Funasaki
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Office hours:

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

Textbook:

College Algebra, 6th edition, by Robert Blitzer.

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:

6%	In-class problems and participation
20%	Homework assignments and quizzes
48%	Exams
26%	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):

Week 1		
1/20	T	P.1 Real Numbers, 1.1 Graphs
1/22	R	2.1 Basics of Functions and Their Graphs
Week 2		
1/27	T	2.1 Basics of Functions and Their Graphs, 2.2 More on Functions and Their Graphs
1/29	R	2.2 More on Functions and Their Graphs
Week 3		
2/3	T	2.3 Linear Functions and Slope
2/5	R	Review
Week 4		
2/10	**T**	**Exam 1**
2/12	R	P.4 Polynomials, 1.4 Complex Numbers
Week 5		
2/17	T	1.5 Quadratic Equations, 3.1 Quadratic Functions
2/19	R	3.1 Quadratic Functions, 3.2 Polynomial Functions and Their Graphs
Week 6		
2/24	T	3.2 Polynomial Functions and Their Graphs
2/26	R	3.3 Dividing Polynomials
Week 7		
3/3	T	3.4 Zeros of Polynomial Functions
3/5	R	3.4 Zeros of Polynomial Functions
Week 8		
3/10	T	Review
3/12	**R**	**Exam 2**
Week 9		
3/17	**T**	**Spring Break (no class)**
3/19	**R**	**Spring Break (no class)**
Week 10		
3/24	T	2.6 Composite Functions, 2.7 Inverse Functions
3/26	R	2.7 Inverse Functions, 4.1 Exponential Functions
Week 11		
3/31	T	4.1 Exponential Functions, 4.2 Logarithmic Functions
4/2	R	4.2 Logarithmic Functions
Week 12		
4/7	T	4.3 Properties of Logarithms
4/9	R	4.4 Exponential and Logarithmic Equations
Week 13		
4/14	T	4.4 Exponential and Logarithmic Equations, 4.5 Exponential Growth and Decay

4/16 R Review

Week 14

4/21 T Exam 3

4/23 R Linear Systems

Week 15

4/28 T Matrix Solutions of Linear Systems

4/30 R Matrix Solutions of Linear Systems

Week 16

5/5 T Vectors, Review

5/7 R Dead Day (no class)

Week 16

5/12 T Final Exam (8 am – 10 am)

5/14 R (no class)

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 is to assign a grade of F when 9 hours of class are missed by a student. For this course that is when you miss **6** classes.

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 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: 432-837-8203. E-mail: mschwartze@sulross.edu.

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