MATH 1316 001 **Spring 2026**

Plane Trigonometry

Time: MW 11 – 12:15
Room: ACR 206

Instructor: Eric Funasaki
Offices: ACR 109C (office hours) and BAB 210 (MW before 10 and after 2, and TRF all day)
Phone: 432-837-8109
e-mail: eric.funasaki@sulross.edu

Office Hours:

MW 10 – 10:50, MW 1 – 1:50, or by appointment.

Textbook:

Trigonometry: A Unit Circle Approach, 12th edition, Michael Sullivan.

Course Description:

In-depth study and application of trigonometry including definitions, identities, inverse functions, solutions of equations, graphing, and solving triangles. Additional topics such as vectors, polar coordinates and parametric equations may be included.

Prerequisite:

Math 1314 College Algebra

Course Objectives:

The student will be able to:
1. Identify and work with trigonometric functions and their graphs;
2. Identify and work with inverse trigonometric functions and their graphs;
3. Solve trigonometric equations;
4. Verify trigonometric identities; and
5. Identify and work with polar coordinates.

Mathematics Program Student Learning Outcomes:

The student will be:
1. Able to demonstrate content knowledge of basic mathematical principles;
2. Proficient in logic, able to negate statements, provide counterexamples to false statements, and determine the validity of arguments; and
3. Able to communicate mathematical content clearly and with valid reasoning.

Marketable Skills:

1. Students demonstrate logical and analytical skills.
2. Students demonstrate problem-solving using analytical and algebraic methods.
3. Students use technology in problem-solving and presentation.
4. Students use communication and pedagogical skills.

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% 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

1/14 W 2.1 Functions, 2.2 The Graph of a Function, 2.3 Properties of Functions

Week 2

1/19 M MLK Jr. Day (no class)
1/21 W 3.1 Angles, Arc Length, and Circular Motion

Week 3

1/26 M 3.1 Angles, Arc Length, and Circular Motion
3.2 Trigonometric Functions: Unit Circle Approach
1/28 W 3.2 Trigonometric Functions: Unit Circle Approach

Week 4

2/2 M 3.3 Properties of Trigonometric Functions
2/4 W 3.3 Properties of Trigonometric Functions
3.4 Graphs of the Sine and Cosine Functions

Week 5

2/9 M 3.4 Graphs of the Sine and Cosine Functions
2/11 W 3.6 Phase Shift; Sinusoidal Curve Fitting

Week 6

2/16 M 3.6 Phase Shift; Sinusoidal Curve Fitting
3.5 Graphs of the Tangent, Cotangent, Cosecant, and Secant Functions
2/18 W Review for Exam 1

Week 7

2/23 M Exam 1
2/25 W 2.7 One-to-One Functions, 4.1 The Inverse Sine, Cosine, and Tangent Functions

Week 8

3/2	M	4.1 The Inverse Sine, Cosine, and Tangent Functions
3/4	W	4.2 The Inverse Trigonometric Functions (Continued)

Week 9

3/9	**M**	**Spring Break (no class)**
3/11	**W**	**Spring Break (no class)**

Week 10

3/16	M	4.3 Trigonometric Equations
3/18	W	4.3 Trigonometric Equations

Week 11

3/23	M	4.5 Sum and Difference Formulas
3/25	W	4.6 Double-angle and Half-angle Formulas

Week 12

3/30	M	4.6 Double-angle and Half-angle Formulas
		5.1 Right Triangle Trigonometry; Applications
4/1	W	Review for Exam 2

Week 13

4/6	**M**	**Exam 2**
4/8	W	5.2 The Law of Sines

Week 14

4/13	M	5.2 The Law of Sines
4/15	W	5.3 The Law of Cosines

Week 15

4/20	M	6.1 Polar Coordinates
4/22	W	Review for Exam 3

Week 16

4/27	**M**	**Exam 3**
4/29	W	Review for Final Exam

Week 17

5/16	**T**	**Final Exam (10:15 am – 12:15 pm)**

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 **6** 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.

Use of Generative Artificial Intelligence (AI):

In this course, every element of class assignments must be fully prepared by the student. The use of generative AI tools for any part of your work will be treated as plagiarism. If you have questions, please contact me.

Student Responsibilities Statement:

All full-time and part-time students are responsible for familiarizing themselves with the Student Handbook and the Undergraduate and Graduate Catalog and for abiding by the University rules and regulations. Additionally, students are responsible for checking their Sul Ross email as an official form of communication from the university. Every student is expected to obey all federal, state, and local laws and is expected to familiarize themselves with the requirements of such laws.

ADA Statement:

SRSU is committed to equal access in compliance with the 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. Students seeking accessibility/accommodations services must contact Ronnie Harris, LPC, SRSU's Accessibility Services Director at 432-837-8203 or email ronnie.harris@sulross.edu. Our office is located on the first floor of Ferguson Hall, room 112, and our mailing address is P.O. Box C122, Sul Ross State University, Alpine, Texas 79832.

Department of Computer, Mathematical, and Physical Sciences
Sul Ross State University
P.O. Box C-18
Alpine, TX 79832