

MATH 1316 Plane Trigonometry Syllabus

Spring 2026, First 8 weeks

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Office Hours: Monday through Friday: 8:30 am until 11 am, or by appointment

Prerequisites: two years of high school algebra or successful completion of MATH 1314

Materials: We will be using the text Precalculus 2nd ed. by Abramson, et al. via OpenStax. This text is free and available via a link on Blackboard. Students will also require the following materials:

- **Calculator:** a scientific calculator (or a calculator that can perform trigonometry calculations) is a requirement. A graphing calculator is helpful, but is not required.
- **Gradescope:** this can be downloaded as an app, as well as accessed from a web browser. This is the way you will be turning in your assignments, and how your feedback will be made available to you.
- **OneNote:**(Optional) Microsoft OneNote (all SPC students have access to this program via their mySPC account) will be used to store nearly all board work done during class. Students will also have their own personal sections (shared with me) to ask questions, take their own notes if desired, and more. I recommend that students take advantage of the program.

This course partially satisfies a Core Curriculum Requirement: Mathematics Foundational Component Area (020)

Core Curriculum Objectives:

- Communications skills - to include effective written, oral and visual communication
- Critical thinking skills - to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
- Empirical and quantitative competency skills - to manipulate and analyze numerical data or observable facts resulting in informed conclusions.

Student Learning Outcomes: Upon completion of this course and receiving a passing grade, the student will be able to:

1. Compute the values of trigonometric functions for key angles in all quadrants of the unit circle measured in both degrees and radians.
2. Graph trigonometric functions and their transformations.
3. Prove trigonometric identities.
4. Solve trigonometric equations.
5. Solve right and oblique triangles.
6. Use the concepts of trigonometry to solve applications.

IT IS THE RESPONSIBILITY OF THE STUDENT TO BE FAMILIAR WITH SOUTH PLAINS COLLEGE POLICIES. BELOW ARE ITEMS SPECIFIC TO THIS COURSE

Assessment: Grading will be done according to the standard 10 percent scale (i.e. 100% - 90% is an A, etc.) with assignments weighted according to the following:

Assignments	20%
Tests (each)	20%
Final Exam	20%

Pedagogy: This class is conducted in a “flipped” model. That is, students are expected to introduce themselves to the material and begin working on the material *before* the class meeting. Class time will be spent discussing more difficult parts of the material, answering student questions, and working on parts of the homework as a class or small groups.

Class Attendance: Students are expected to be in class and prepared for the day’s lesson. Students are responsible for the material covered in this course, whether or not they are in class for any reason. A student missing more than 4 individual class days without continuing notification may be dropped from the course. Please note that state guidelines only allow for 6 withdrawn courses total.

Assignments (including exams) cannot be submitted late, nor made up in the case of an absence except at my discretion

Assignments: Assignments over the learning material will be turned in almost daily to GradeScope. They should consist of any notes taken over the material (from any source!) and fully worked problems from the assignments given over the material. Additional study helps/habits such as mind-maps and written summaries can (and should!) be included within these assignments. They will be graded on both the quantity and quality of the content submitted. Quizzes will be assigned at the end of class weekly and will be calculated as part of the Assignments grade.

Exams: There will be two midterm exams given during this course. During exams cell phones, laptops, and other such objects should be turned off and put away. There is no tolerance for violations. Students who break these rules will be asked to leave the exam (counted as an absence) and receive a zero for their exam grade. *Exams cannot be retaken, rescheduled, or made up.*

Final Exam: The final exam is comprehensive, and a required part of the course. Failure to take the final exam results in an automatic F. As the final exam is comprehensive, your course grade will not be lower than your final exam score. The Final Exam will be held in this classroom on Thursday, March 5, at 1 pm

Extra Credit: Extra credit is not offered in this course. Occasionally bonus problems may be assigned on exams.

Date	Topics	Sections
Monday 1/12/2026	Angles, Circles, Geometry	5.1
Tuesday 1/13/2026	Unit Circle with Sine and Cosine	5.2
Wednesday 1/14/2026	Unit Circle with other Trigonometric Functions	5.3
Thursday 1/15/2026	Right Triangles	5.4
Monday 1/19/2026	<i>Campus Closed - MLK, Jr. Holiday</i>	
Tuesday 1/20/2026	Graphs of Sine and Cosine	6.1
Wednesday 1/21/2026	Graphs of Other Functions	6.2
Thursday 1/22/2026	Inverse Trigonometric Functions	6.3
Monday 1/26/2026	EXAM - Trig Basics (Ch. 5 and 6)	
Tuesday 1/27/2026	Fundamental Identities	7.1
Wednesday 1/28/2026	Sum/Difference Identities	7.2
Thursday 1/29/2026	Multiple Angle Identities	7.3
Monday 2/2/2026		
Tuesday 2/3/2026	Product-Sum and Sum-Product Identities	7.4
Wednesday 2/4/2026	Solving Equations	7.5
Thursday 2/5/2026		
Monday 2/9/2026	Modeling with Trigonometric Functions	7.6
Tuesday 2/10/2026		
Wednesday 2/11/2026	EXAM - Analytic Trigonometry (Ch. 7)	
Thursday 2/12/2026	Law of Sines	8.1
Monday 2/16/2026	Law of Cosines	8.2
Tuesday 2/17/2026		
Wednesday 2/18/2026	Polar Equations/Functions	8.3
Thursday 2/19/2026	Polar Graphs	8.4
Monday 2/23/2026	Parametric Equations	8.6
Tuesday 2/24/2026	Parametric Graphs	8.7
Wednesday 2/25/2026	Vectors	8.8
Thursday 2/26/2026		
Monday 3/2/2026	EXAM - Applications of Trigonometry	
Tuesday 3/3/2026	Final Review	
Wednesday 3/4/2026	Final Review	
Thursday 3/5/2026	FINAL EXAM	