

South Plains College
Common Course Syllabus: MATH 1316 – Plane Trigonometry
Spring 2021

Department: Mathematics, Engineering, and Computer Science

Discipline: Mathematics

Course Number: MATH 1316

Section: 441 (MWF, 8:00-8:50am, ITV/TC205)
442 (MWF, 9:00-9:50am, ITV/TC205)

Course Title: Plane Trigonometry

Available Formats: conventional/flex and ITV. This is an ITV class.

Campuses: Levelland, Reese, and Dual Credit. This in a dual credit class.

Course Description: In-depth study and applications 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: Minimum score of 350 on the TSIA, TSI-exempt status, or a successful completion with a grade of 'C' or better in MATH 1314.

Credit: 3 **Lecture:** 3 **Lab:** 0

Instructor: Jerod Clopton

Telephone: (806) 716-2738

Office: Math and Engineering Building, M102

Email: jclopton@southplainscollege.edu

Virtual/Face-to-Face Office Hours:

- Mondays: 10:30am-12:00pm
- Tuesdays: 10:00-10:45am, 1:15-2:15pm
- Wednesdays: 10:30am-12:00pm
- Thursdays: 10:00-10:45am, 1:15-2:15pm
- Fridays: 10:30am-12:00pm (* virtual office hours only)
- And by appointment (scheduled in Blackboard)

**Virtual office hours may be scheduled in Blackboard.*

Textbook: *Trigonometry*, Dugopolski, 2019, 5th Edition, Prentice Hall/Pearson Education

Supplies: Pencils, 8x11.5 in. notebook paper, graph paper, scientific calculator (graphing calculators or calculators on cellphones or apps are not allowed). Access to the course textbook is required as homework problems will come from the textbook. Make certain you have access to a scanner or scanning app such as CamScanner, Scannable, OneDrive, etc. in order to scan your assignments/quizzes and submit them through Blackboard.

Blackboard: Blackboard is the online course management system that will be utilized for this course. This course is supplemented online, so all access to course information and your instructor is through the Internet. This course syllabus, as well as all course materials can be accessed through Blackboard. Login at

<https://southplainscollege.blackboard.com/>. The user name and password should be the same as the MySPC and SPC email.

User name: first initial, last name, and last 4 digits of the Student ID

Password: Original CampusConnect Pin No. (found on SPC acceptance letter)

Questions regarding Blackboard support may be emailed to blackboard@southplainscollege.edu or by telephone to 806-716-2180.

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

Core Curriculum Objectives addressed:

- **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.

Student Learning Outcomes Assessment: A pre- and post-test questions will be used to determine the extent of improvement that the students have gained during the semester

Course Evaluation: There will be a comprehensive departmental final exam given by all instructors. The average of weekly participation and quiz grades will account for 24% of the final grade, while exams will account for 76% of the final grade. Your final average in the course will determine the letter grade posted on your transcript. This grade is determined by the following scale: A (90-100%), B (80-89%), C (70-79%), D (60-69%), F (0-59%).

Grading Policy: Participation Grades (14 grades taken, 4 of which are extra credit) = 12%

Quiz Grades (14 grades taken, 4 of which are extra credit) = 12%

Exam Grades (4 exams at 14% each) = 56%

Final Exam = 20%

To maximize your potential for successfully completing this course:

- login to Blackboard daily;
- watch the lecture videos and take notes on them;
- thoroughly complete and submit the assignments on time;
- practice the exercises repeatedly until you have full mastery of them.

Participation: Participation is vital for success in this course. You will receive a weekly participation grade. Part of this grade will come from the completion of section lecture notes and homework assignments.

Homework: A set of homework problems will accompany each section. Homework is the means by which the student works to understand the material and prepare for assessments (quizzes and exam). The homework will not

be graded. However, part of your participation grade will come from submitting your work done for each homework assignment.

Quizzes: Quizzes are given to determine if the student is mastering the required skills of the course. Weekly quizzes will be given, and the questions will be similar to the questions in the homework assignments. No make-up quizzes will be given. Your work for each quiz will be scanned and submitted as a single PDF file into Blackboard, by the submission deadline. If you do not have access to a scanner, you may use a mobile app to create a PDF file of your work.

Exams: Exams will be given during the scheduled class times on the dates stated on the course calendar. Expect to have four unit exams and a comprehensive final exam. Your work for each exam will be scanned and submitted as a single PDF file into Blackboard, by the submission deadline. If you do not have access to a scanner, you may use a mobile app to create a PDF file of your work.

Attendance/Student Engagement Policy: Attendance and effort are the most important activities for success in this course. The instructor maintains records of the student's engagement throughout the semester. The student will be allowed to miss twenty percent (20%) of class assignments for the semester, *for any reason*. Should this number be exceeded, the instructor has the right to drop the student with a grade of F or an X, depending on the instructor's discretion.

Before arriving for the class meeting, make certain you have:

1. worked through the notes and videos for that day's lessons;
2. completed a majority of the assigned exercises.

Assignment Format and Policy: Assignments are given for each lesson and will be collected on a weekly basis, (assignments along with your notes are part of your participation grade). Expect a weekly quiz to accompany each week's assignments. For each question on each assignment:

- Write the question number.
- In solving the problem, show all necessary work.
- Clearly mark your answer.
- Write your name at the top of each page of your work.
- Write the course number and section number on the first page of your work.
- Submit the assignment in Blackboard as a single pdf file. (Pdf files can be generated easily using a scanner or many freely available phone apps, like CamScanner, Scannable, or OneDrive.)

No late assignments or quizzes will be accepted. Make certain to complete and submit assignments on time (or early). Early submissions are welcomed!

Exam Format and Policy: There are four (4) units of study in this course. At the conclusion of each unit is an in-class examination as specified on the Tentative Course Calendar. At the end of the semester is a comprehensive final examination at the specified time on the Tentative Course Calendar. If there becomes a quarantine issue or movement of this class to an online setting, then adequate internet supplies will be needed, such as a webcam, microphone, and access to online collaborative tools like Blackboard Collaborate or Zoom.

MATH 1316 Tentative Course Schedule for Spring 2021

Week	Date	Topic
1	Mon, Jan 11	Introduction
	Wed, Jan 13	1.1 Angles and Degree Measure
	Fri, Jan 15	
2	Mon, Jan 18	No Class (Martin Luther King Holiday)
	Wed, Jan 20	1.2 Radian Measure, Arc Length, Area
	Fri, Jan 22	1.3 Angular and Linear Velocity
3	Mon, Jan 25	1.4 The Trig Functions
	Wed, Jan 27	1.5 Right Triangle Trigonometry

	Fri, Jan 29	
4	Mon, Feb 1	1.6 Fundamental Identities and Reference Angles
	Wed, Feb 3	Review
	Fri, Feb 5	Exam 1
5	Mon, Feb 8	2.1 The Unit Circle and Graphing
	Wed, Feb 10	2.2 The General Sine Wave
	Fri, Feb 12	
6	Mon, Feb 15	2.3 Graphs of Secant and Cosecant Functions
	Wed, Feb 17	2.4 Graphs of Tangent and Cotangent Functions
	Fri, Feb 19	3.1 Basic Identities
7	Mon, Feb 22	3.2 Verifying Identities
	Wed, Feb 24	Review
	Fri, Feb 26	Exam 2
8	Mon, Mar 1	3.3 Sum and Difference Identities for Cosine
	Wed, Mar 3	3.4 Sum and Difference Identities for Sine and Tangent
	Fri, Mar 5	
9	Mon, Mar 8	3.5 Double and Half Angle Identities
	Wed, Mar 10	3.6 Product and Sum Identities
	Fri, Mar 12	
Spring Break – March 15 through March 19		
10	Mon, Mar 22	4.2 Basic Sine, Cosine, and Tangent Equations
	Wed, Mar 24	Review
	Fri, Mar 26	Exam 3
11	Mon, Mar 29	4.3 Equations Involving Compositions
	Wed, Mar 31	4.4 Trig Equations of Quadratic Type
	Fri, Apr 2	No Class (Easter Holiday)
12	Mon, Apr 5	5.1 The Law of Sines
	Wed, Apr 7	5.2 The Law of Cosines
	Fri, Apr 9	
13	Mon, Apr 12	5.3 Area of a Triangle
	Wed, Apr 14	5.4 Vector
	Fri, Apr 16	
14	Mon, Apr 19	5.5 Application of Vectors
	Wed, Apr 21	Review
	Fri, Apr 23	Exam 4
15	Mon, Apr 26	Review for Final Exam
	Wed, Apr 28	Review for Final Exam
	Fri, Apr 30	Review for Final Exam
16	Mon, May 3	Final Exam, 8:00 – 10:00

Academic Integrity (Plagiarism and Cheating Policy): “Complete honesty is required of the student in the presentation of any and all phases of course work. This idea applies to quizzes of whatever length as well to final examinations, to daily reports, and to term papers” (*SPC General Catalog*).

Plagiarism violations include, but are not limited to, the following:

1. Turning in a paper that has been purchased, borrowed, or downloaded from another student, an online term paper site, or a mail order term paper mill;
2. Cutting and pasting together information from books, articles, other papers, or online sites without providing proper documentation;
3. Using direct quotations (three or more words) from a source without showing them to be direct quotations and citing them; or
4. Missing in-text citations.

Cheating violations include, but are not limited to, the following:

1. Obtaining an examination by stealing or collusion;
2. Discovering the content of an examination before it is given;
3. Using an unauthorized source of information (notes, textbook, text messaging, internet, apps) during an examination, quiz, or homework assignment;
4. Entering an office or building to obtain an unfair advantage;
5. Taking an examination for another;
6. Altering grade records;
7. Copying another's work during an examination or on a homework assignment;
8. Rewriting another student's work in Peer Editing so that the writing is no longer the original student's;
9. Taking pictures of a test, test answers, or someone else's paper.

Email Policy: All students at South Plains College are assigned a standardized SPC e-mail account. Although personal e-mail addresses will continue to be collected, the assigned SPC e-mail account will be used as the official channel of communication for South Plains College. The Student Correspondence Policy can be found at www.southplainscollege.edu. To access the SPC student e-mail account, log in to portal.office.com. (Copied from SPC Student Guide)

Since all students have an assigned SPC email, the instructor will only acknowledge, respond, and send emails to your assigned SPC email. This ensures all correspondence from the instructor is received by the intended recipient.

COVID Syllabus Statement: It is the policy of South Plains College for the Spring 2021 semester that as a condition of on-campus enrollment, all students are required to engage in safe behaviors to avoid the spread of COVID-19 in the SPC community. Such behaviors specifically include the requirement that all students properly wear CDC-compliant face coverings while in SPC buildings including in classrooms, labs, hallways, and restrooms. Failure to comply with this policy may result in dismissal from the current class session. If the student refuses to leave the classroom or lab after being dismissed, the student may be referred to the Dean of Students on the Levelland campus or the Dean/Director of external centers for Student Code of Conduct Violation. Students who believe they have been exposed or may be COVID-19 positive, must contact Health Services, DeEtte Edens, BSN, RN at (806) 716-2376 or dedens@southplainscollege.edu.

Student Code of Conduct Policy: Any successful learning experience requires mutual respect on the part of the student and the instructor. Neither instructor nor student should be subject to others' behavior that is rude, disruptive, intimidating, aggressive, or demeaning. Student conduct that disrupts the learning process or is deemed disrespectful or threatening shall not be tolerated and may lead to disciplinary action and/or removal from class.

Diversity Statement: In this class, the teacher will establish and support an environment that values and nurtures individual and group differences and encourages engagement and interaction. Understanding and respecting multiple experiences and perspectives will serve to challenge and stimulate all of us to learn about others, about the larger world and about ourselves. By promoting diversity and intellectual exchange, we will not only mirror society as it is, but also model society as it should and can be.

Disability Statement: Students with disabilities, including but not limited to physical, psychiatric, or learning disabilities, who wish to request accommodations in this class should notify the Disability Services Office early in the semester so that the appropriate arrangements may be made. In accordance with federal law, a student requesting accommodations must provide acceptable documentation of his/her disability to the Disability Services Office. For more information, call or visit the Disability Services Office at Levelland (Student Health & Wellness Office) 806-716-2577, Reese Center (Building 8) 806-716-4675, or Plainview Center (Main Office) 806-716-4302 or 806-296-9611.

Nondiscrimination Policy: South Plains College does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities. The following person has been designated to handle inquiries

regarding the non-discrimination policies: Vice President for Student Affairs, South Plains College, 1401 College Avenue, Box 5, Levelland, TX 79336. Phone number 806-716-2360.

Title IX Pregnancy Accommodations Statement: If you are pregnant, or have given birth within six months, Under Title IX you have a right to reasonable accommodations to help continue your education. To [activate](#) accommodations you must submit a Title IX pregnancy accommodations request, along with specific medical documentation, to the Director of Health and Wellness. Once approved, notification will be sent to the student and instructors. It is the student's responsibility to work with the instructor to arrange accommodations. Contact the Director of Health and Wellness at 806-716-2362 or [email cgilster@southplainscollege.edu](mailto:cgilster@southplainscollege.edu) for assistance.

Campus Concealed Carry: Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in South Plains College buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and South Plains College policy, license holders may not carry a concealed handgun in restricted locations. For a list of locations and Frequently Asked Questions, please refer to the Campus Carry page at: <http://www.southplainscollege.edu/campuscarry.php>
Pursuant to PC 46.035, the open carrying of handguns is prohibited on all South Plains College campuses. Report violations to the College Police Department at 806-716-2396 or 9-1-1.

SPC Bookstore Price Match Guarantee Policy: If you find a lower price on a textbook, the South Plains College bookstore will match that price. The difference will be given to the student on a bookstore gift certificate! The gift certificate can be spent on anything in the store.

If students have already purchased textbooks and then find a better price later, the South Plains College bookstore will price match through the first week of the semester. The student must have a copy of the receipt and the book has to be in stock at the competition at the time of the price match.

The South Plains College bookstore will happily price match BN.com & books on Amazon noted as *ships from and sold by Amazon.com*. Online marketplaces such as *Other Sellers* on Amazon, Amazon's Warehouse Deals, *fulfilled by Amazon*, BN.com Marketplace, and peer-to-peer pricing are not eligible. They will price match the exact textbook, in the same edition and format, including all accompanying materials, like workbooks and CDs.

A textbook is only eligible for price match if it is in stock on a competitor's website at time of the price match request. Additional membership discounts and offers cannot be applied to the student's refund.

Price matching is only available on in-store purchases. Digital books, access codes sold via publisher sites, rentals and special orders are not eligible. Only one price match per title per customer is allowed.

Note: The instructor reserves the right to modify the course syllabus and policies, as well as notify students of any changes, at any point during the semester.

Disclaimer: The instructor reserves the right to alter any class policies/dates as deemed necessary by the instructor and will announce any changes in class or in Blackboard.