South Plains College
Common Course Syllabus: Plane Trigonometry (MATH 1316)
Spring 2024

Department: Mathematics, Engineering, and Computer Science

Discipline: Mathematics

Course Number: MATH 1316

Section: 441 (Mondays, Wednesdays, and Fridays, 9:00-9:50am, Interactive Video)

Course Title: Plane Trigonometry

Available Formats: conventional, hybrid, internet, and ITV. This class will be of the ITV format.

Campuses: Levelland, Downtown Center, Plainview Center, and Dual Credit. This class meets through interactive video

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 TSIA1, minimum score of 950 on the TSIA2, a diagnostic score of 6 on the TSIA2, 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
Office: Lubbock Downtown Center, B019
Telephone: (806) 716-2738
Email: jclopton@southplainscollege.edu

Email Policy: All students at South Plains College are assigned a standardized SPC email. Log into portal.office.com to access to your SPC email account. The instructor will only acknowledge, respond, and receive emails to your assigned email address.
- My expected response time to received emails is as follows:
  - For emails sent on Monday-Thursday, I will attempt to respond within 24 hours.
  - For emails sent on Friday-Sunday, I may not respond until the following Monday.
- I will not be checking / responding to messages sent through the Blackboard messaging system.

Virtual/Face-to-Face Office Hours:
- Monday: 3:00-5:00pm
- Tuesday: 9:00-11:00am
- Thursday: 9:00-11:00am
- Fridays: 10:00am-12:00pm
- And by appointment, as needed. (The appointments can be scheduled in Blackboard.)
- Virtual office hours also may be scheduled in Blackboard.

Textbook: A textbook is <u>not</u> required for this section of this course. However, there are a couple of references that are available to the student.
- Freely available online: Algebra and Trigonometry 2e from OpenStax, Print ISBN 978-1-711494-03-6, Digital ISBN 978-1-951693-40-4, https://openstax.org/details/books/algebra-and-trigonometry-2e
- The course material in this course are built from the content of the following textbook: *Trigonometry*, Dugopolski, 2019, 5th Edition, Prentice Hall/Pearson Education, ISBN0-135-20733-9

Supplies: Besides pencils (please show your work in pencil) and paper, you will need a scientific calculator and a small supply of graph paper. Calculators on cell phones, TI-89, TI-92, or TI-Inspire calculators, or any other electronic devices will not be allowed during testing without permission from the instructor. Make certain you have access to a scanner or scanning app. <u>Gradescope is the recommended app</u>. Other apps such as CamScanner, Scannable, OneDrive, etc. are helpful 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 username and password should be the same as the MySPC and SPC email.

> Username: first initial, last name, and last 4 digits of the Student ID
> Password: Original Campus Connect 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 (assignments, quizzes, and major exams) will be used to determine the extent of improvement that the students have gained during the semester

Course Evaluation: There will be departmental final exam questions given by all instructors. Assignments and quizzes will count for 20% of the final grade, while exams count for 80% of the final grade. Expect 24 assignments, approximately 8 quizzes, and 5 scheduled exams throughout the course. 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%).

- Assignments = 10%
- Quizzes = 10%
- Exam 1 = 15%
- Exam 2 = 15%
- Exam 3 = 15%
- Exam 4 = 15%
- Final Exam = 20%

Assignment Format and Policy: Assignments are given after each lesson and are collected according to the calendar below. For each question on each assignment:
- Write your name at the top of each page of your work.
- Write the assignment title on the first page of your work.
- For each assigned problem write the problem number.
- In solving the problem, show all necessary work.
- Clearly mark your answer.
- Check your answers in Blackboard to make certain you are practicing the exercises correctly.
- Submit the assignment in Gradescope as a single PDF file, preferably using the Gradescope app.
- All homework assignments will be due by 9:50am on the assigned due date (unless otherwise stated).

Make certain to complete and submit assignments on time (or early). Early submissions are welcomed! Late assignments will be accepted with a 15% deduction up to the time of the unit exam. Assignments may not be submitted after the unit exam.

Quiz Format and Policy: Expect a face-to-face quiz to be given on the assigned dates according to the calendar below. No late quizzes will be accepted, as quizzes are to be taken during the class time. Quizzes will be scanned and submitted into Gradescope by the end of that day's class meeting.

Exam Format and Policy: Face-to-face examinations will be given on specified days in the calendar below. Exams are to be taken during the class time. No make-up exams will be given. The comprehensive final exam will be given on Wednesday, May 8 from 8:00–10:00am.

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.

Attendance/Student Engagement Policy: Attendance and engagement are the most critical activities for success in this course. The instructor maintains records of the student's attendance and submission of assignments throughout the semester. The student is expected to attend at least eighty percent (80%) of the **total** class meetings **and** submit at least eighty percent (80%) of the **total** class assignments to have the best chance of success. If the student fails to meet these minimum requirements, the instructor may remove the student from the class with an X, upon their discretion, to help the student from harming their GPA. If the student can not receive an X, the instructor will assign an F.

SPC Tutors
Tutoring is FREE for all currently enrolled students. Make an appointment or drop-in for help at any SPC location or online! Visit the link below to learn more about how to book an appointment, view the tutoring schedule, and view tutoring locations.
http://www.southplainscollege.edu/exploreprograms/artsandsciences/teacheredtutoring.php

Tutor.com
You also have 180 FREE minutes of tutoring with Tutor.com each week, and your hours reset every Monday morning. Log into Blackboard, click on the tools option from the left-hand menu bar. Click on the Tutor.com link and you will automatically be logged in for free tutoring. You may access tutor.com tutors during the following times:

      Monday – Thursday: 8pm-8am
      6pm Friday – 8am Monday morning

For questions regarding tutoring, please email tutoring@southplainscollege.edu or call 806-716-2538.

Academic Integrity (Plagiarism and Cheating Policy):

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.

It is the aim of the faculty of South Plains College to foster a spirit of complete honesty and a high standard of integrity. The attempt of any student to present as his or her own any work which he or she has not honestly performed is regarded by the faculty and administration as a most serious offense and renders the offender liable to serious consequences, possibly suspension. (SPC General Catalog)

Plagiarism and cheating are not tolerated in this course. Under the policies of South Plains College, punishment for cheating may include no credit (failing) on the assignment, quiz, exam, or the course.

Student Code of Conduct Policy: Any successful learning experience requires mutual respect from the student and the instructor. Neither the instructor nor the student should be subject to others' rude, disruptive, intimidating, aggressive, or demeaning behavior**.** 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.

Syllabus Statements: For information regarding official South Plains College statements about intellectual exchange, disabilities, non-discrimination, Title IX Pregnancy Accommodations, CARE Team, and Campus Concealed Carry, please visit https://www.southplainscollege.edu/syllabusstatements/.

COVID Response: South Plains College policies, return to campus plan, and protocols regarding COVID-19 can be found here: https://www.southplainscollege.edu/emergency/covid19-faq.php.

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.
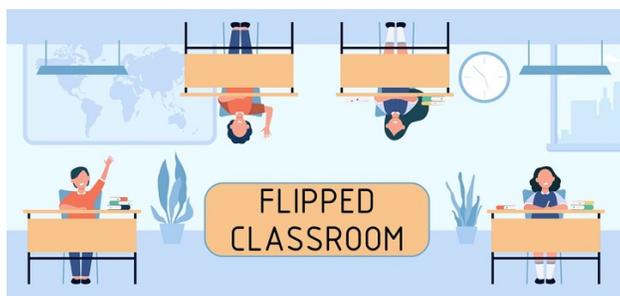
Tips for Learning in a Flipped Classroom

This class is a flipped classroom and will operate differently than the face-to-face classroom that you have previously experienced. In a flipped classroom you will spend time outside of class watching and taking notes from lecture videos while during class you will work on your homework assignments. This flipped classroom setting will open more opportunities for me, the instructor, to work with you by addressing homework questions, facilitating class discussions, and having collaborative assignments. Here are some suggestions that will help you operate with in this flipped classroom environment and help you successfully complete this course.

Lecture Videos
- Watch the lecture videos in a quiet and distraction-free setting
- Silence your cellphone
- Close all other tabs and windows on your computer
- Disconnect from any social media while watching the lecture videos
- Have class notes or notebook and writing device for taking notes
- Use a set of headphones to watch to videos, in order to cancel all ambient noise

Note-Taking Tips
- Take careful notes from the videos
- Draw appropriate diagrams and charts in your notes
- Frequently pause the video to take notes
- "Rewind" the video when you don't understand things
- When the instructor tells you to solve a problem or write something down, do it
- Write down questions in your notes from the lecture video when you don't understand something

How to Prepare for Assessments
- Contact the instructor with your questions and ask the instructor for help and clarification
- Work with your classmates
- Offer to help your classmates with things you understand
- Ask for help from your classmates when they understand more than you
- Take any opportunity to review current and previous material
- Review graded assessments and seek to understand any errors made in your work

Tentative Course Calendar: Plane Trigonometry (MWF 9:00)
Spring 2024

Week	Date	Topic	Assignment Due Date
			• Assignments are due by 9:50 am on the assigned due date. • Quizzes are due by the end of the class meeting.
1	Mon, Jan 15	**MLK Holiday**	
	Wed, Jan 17	Course Introduction	
	Fri, Jan 19	1.1 – Angles and Degree Measure	
2	Mon, Jan 22	1.2 – Radian Measure, Arc Length, Area	1.1
	Wed, Jan 24	1.3 – Angular and Linear Velocity	1.2
	Fri, Jan 26	QUIZ 1	1.3 Quiz 1
3	Mon, Jan 29	1.4 – The Trig Functions	
	Wed, Jan 31	1.5 – Right Triangle Trigonometry	1.4
	Fri, Feb 2	QUIZ 2	1.5 Quiz 2
4	Mon, Feb 5	1.6 – Fundamental Identities and Reference Angles	
	Wed, Feb 7	Review for Exam 1	1.6
	Fri, Feb 9	**Exam 1**	Exam 1
5	Mon, Feb 12	3.1 – Basic Identities	
	Wed, Feb 14	3.2 – Verifying Identities	3.1
	Fri, Feb 16	QUIZ 3	3.2 Quiz 3
6	Mon, Feb 19	3.3 – Sum and Difference Identities for Cosine	
	Wed, Feb 21	3.4 – Sum and Difference Identities for Sine and Tangent	3.3
	Fri, Feb 23	QUIZ 4	3.4 Quiz 4
7	Mon, Feb 26	3.5 – Double and Half Angle Identities	
	Wed, Feb 28	3.6 – Product and Sum Identities	3.5
	Fri, Mar 1	QUIZ 5	3.6 Quiz 5
8	Mon, Mar 4	Review for Exam 2	
	Wed, Mar 6	**Exam 2**	Exam 2
	Fri, Mar 8		

		Spring Break (March 11-15)	
9	Mon, Mar 18	2.1 – The Unit Circle and Graphing 2.2 – The General Sine Wave	
	Wed, Mar 20	2.3 – Graphs of Secant and Cosecant Functions	2.1 and 2.2
	Fri, Mar 22	QUIZ 6	2.3 Quiz 6
10	Mon, Mar 25	2.4 – Graphs of Tangent and Cotangent Functions	
	Wed, Mar 27	4.2 – Basic Sine, Cosine, and Tangent Equations	2.4
	Fri, March 29	**Easter Break**	
11	Mon, Apr 1	4.3 – Equations Involving Compositions	4.2
	Wed, Apr 3	4.4 – Trig Equations of Quadratic Type	4.3
	Fri, Apr 5	Quiz 7	4.4 Quiz 7
12	Mon, Apr 8	Review for Exam 3	
	Wed, Apr 10	**Exam 3**	Exam 3
	Fri, Apr 12		
		Online Registration opens for Spring Interim, Summer 2024 terms, and Fall 2024 terms at 8:00 a.m.	
13	Mon, Apr 15	5.1 – The Law of Sines	
	Wed, Apr 17	5.2 – The Law of Cosines	5.1
	Fri, Apr 19	QUIZ 8	5.2 Quiz 8
14	Mon, Apr 22	5.3 – Area of a Triangle	
	Wed, Apr 24	5.4 – Vectors	5.3
	Thur, Apr 25	**Last day to drop a Spring course**	
	Fri, Apr 26	5.5 – Application of Vectors	5.4
15	Mon, Apr 29	**Exam 4**	5.5 Exam 4
	Wed, May 1	Review for Final Exam	
	Fri, May 3	Review for Final Exam	
16	Wed, May 8	**Final Exam from 8:00-10:00am**	