South Plains College
Common Course Syllabus: Trigonometry (MATH 1316)
Spring 2023

Department: Mathematics, Engineering, and Computer Science

Discipline: Mathematics

Course Number: MATH 1316

Section: 441 (Mondays, Wednesdays, Fridays, 9:00-9:50am, ITV Zoom meeting)

Course Title: Plane Trigonometry

Available Formats: conventional, hybrid, internet, and ITV. This class

Campuses: Levelland, Downtown Center, and Dual Credit

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: Levelland Campus, Math and Engineering Building, M102
Telephone: (806) 716-2738
Email: jclopton@southplainscollege.edu

Office Hours:
- Monday: 3:00 – 5:00 PM
- Tuesday: 3:00 – 5:00 PM
- Wednesday: 3:00 – 5:00 PM
- Tuesdays 3:00 – 5:00 PM
- Alternative times to meet may be scheduled with the instructor.

Email Policy: All students at South Plains College are assigned a standardized SPC email. Log into portal.office.com to access to you 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.

Flipped Classroom: This is a flipped classroom. Simply put this means that you will be introduced to course content outside of the classroom and then practice the material during class. To be successful in

this class you will need to prepare for each class by watching the lecture videos, taking notes on the lecture videos, and begin working on the homework. Class time will be spent addressing any questions that you have over the lecture, subject material, or homework.

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

Supplies:
- Pencils, erasers, 8.5-inch x 11-inch notebook paper, graph paper, scientific calculator (graphing calculators or calculators on cellphones or apps are not allowed).
- Access to the textbook for this course is required, as homework problems will come from the textbook.
- Access to a printer and scanner, or scanning app such as CamScanner, OneDrive, Scannable, etc., in order to scan your notes, assignments, and quizzes, into PDF files.
  - I advise that you download the Gradescope app.

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)

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 departmental final exam questions given by all instructors. Assignments, quizzes, and exam corrections will count for 16% of the final grade, while exams count for 84% 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%).

- Homework Assignments = 6%
- Quizzes = 10%
- Exam 1 = 16%
- Exam 2 = 16%
- Exam 3 = 16%
- Exam 4 = 16%
- Final Exam = 20%

Homework: For each lesson you will have an assigned set of homework problems from the textbook. Homework will be submitted as a single PDF file through Gradescope, (use the Gradescope app to upload your work directly into Gradescope.) No late assignments will be accepted. The purpose of homework is to provide you with the opportunity to practice and master the material of this course. Be sure to follow the following homework requirements.
- Work must be done on 8.5 x 11-inch notebook paper and written in pencil.
- The first page of your work should have your name, class, and assignment title. Your name should be written on each page of your work.
- Work should be done in a neat and legible manner.
    - Work must be done in either a single column or double column down the page.
- All work must be shown, and the work must justify the answer.
- All answers must be either circled or boxed in.
- Homework will be submitted by the student into Gradescope.
    - When submitting work, scan all pages into a single PDF file.
    - Use the Gradescope App to scan and submit homework.
- The final five homework assignments will count as extra credit.

Quizzes: Questions for the quizzes will be taken from, or be similar to, the questions from the homework assignments.
- Quizzes must be taken in pencil.
- No make-up quizzes will be given.
- Quizzes will be submitted by the student into Gradescope.
    - When submitting work, scan all pages into a single PDF file.
    - Use the Gradescope App to scan and submit homework.

Exams: Exams will be given during the scheduled class times on the dates stated on the course calendar. Exams must be taken in pencil. Once you begin the exam, you may not leave the room until the exam is submitted for grading. No make-up exams will be given. Exams will be scanned by class facilitator and sent to the instructor as a single PDF file.

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 <u>may</u> 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.

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.

Before arriving for the class meeting, make certain you have:
1. worked through the notes and videos for that day's lessons
2. completed some of the assigned homework problems.

Upon arriving at the class meeting, we will:
1. answer questions over homework assignment
2. work through the homework assignment
3. take in class quiz (on assigned quiz days) and submit assignments

Resources:
- Please come to me first with any questions that you have about this class. Feel free to come by my office during my office hours or email me.
- **SPC Tutoring:** 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

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.

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.

South Plains College policies concerning diversity, disabilities, non-discrimination, Title IX Pregnancy Accommodations, and Campus Concealed Carry Statements can be found here: https://www.southplainscollege.edu/syllabusstatements/.

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.

MATH 1316: Plane Trigonometry
Tentative Course Calendar
Spring 2023 (M/W/F 9:00-9:50; Zoom)

Date		Topic	Assignment Due Dates
Unit 1 – Angles and Trigonometric Functions			
Week 1	Mon, Jan 16	**Martin Luther King, Jr. Holiday (No Class)**	
	Wed, Jan 18	Introduction	
	Fri, Jan 20	1.1 – Angles and Degree Measure	Tues, Jan 24 by 11:59 p.m.
Week 2	Mon, Jan 23	1.2 – Radian Measure, Arc Length, Area	Tues, Jan 24 by 11:59 p.m.
	Wed, Jan 25	1.4 – The Trig Functions	Thur, Jan 28 by 11:59 p.m.
	Fri, Jan 27	QUIZ 1	Fri, Jan 27 by 9:59 a.m.
Week 3	Mon, Jan 30	1.5 – Right Triangle Trigonometry	Tues, Jan 31 by 11:59 p.m.
	Wed, Feb 1	1.6 – Fundamental Identities and Reference Angles	Thur, Feb 2 by 11:59 p.m.
	Fri, Feb 3	QUIZ 2	Fri, Feb 3 by 9:59 a.m.
Week 4	Mon, Feb 6	1.3 – Angular and Linear Velocity	Tues, Feb 7 by 11:59 p.m.
	Wed, Feb 8	Review for Exam 1	Thur, Feb 9 by 11:59 p.m.
	Fri, Feb 10	**Exam 1**	
Unit 2 – Trigonometric Identities			
Week 5	Mon, Feb 13	3.1 – Basic Identities	Tues, Feb 14 by 11:59 p.m.
	Wed, Feb 15	3.2 – Verifying Identities	Thur, Feb 16 by 11:59 p.m.
	Fri, Feb 17	QUIZ 3	Fri, Feb 17 by 9:59 a.m.
Week 6	Mon, Feb 20	3.3 – Sum and Difference Identities for Cosine	Tues, Feb 21 by 11:59 p.m.
	Wed, Feb 22	3.4 – Sum and Difference Identities for Sine and Tangent	Thur, Feb 23 by 11:59 p.m.
	Fri, Feb 24	QUIZ 4	Fri, Feb 24 by 9:59 a.m.
Week 7	Mon, Feb 27	3.5 – Double and Half Angle Identities	Tues, Feb 28 by 11:59 p.m.
	Wed, Mar 1	3.6 – Product and Sum Identities	Thur, Mar 2 by 11:59 p.m.
	Fri, Mar 3	QUIZ 5	Fri, Mar 3 by 9:59 a.m.
Week 8	Mon, Mar 6	Review for Exam 2	
	Wed, Mar 8	**Exam 2**	
	Fri, Mar 10		
Spring Break – March 13-17			

Unit 3 – Graphs of Trigonometric Functions and Trigonometric Equation			
Week 9	Mon, Mar 20	2.1 – The Unit Circle and Graphing 2.2 – The General Sine Wave	Tues, Mar 21 by 11:59 p.m.
	Wed, Mar 22	2.3 – Graphs of Secant and Cosecant Functions	Thur, Mar 3 by 11:59 p.m.
	Fri, Mar 24	QUIZ 6	Fri, Mar 24 by 9:59 a.m.
Week 10	Mon, Mar 27	2.4 – Graphs of Tangent and Cotangent Functions	Tues, Mar 28 by 11:59 p.m.
	Wed, Mar 29	4.2 – Basic Sine, Cosine, and Tangent Equations	Thur, Mar 30 by 11:59 p.m.
	Fri, Mar 31	QUIZ 7	Fri, Mar 31 by 9:59 a.m.
Week 11	Mon, Apr 3	4.3 – Equations Involving Compositions	Tues, Apr 4 by 11:59 p.m.
	Wed, Apr 5	4.4 – Trig Equations of Quadratic Type	Thur, Apr 6 by 11:59 p.m.
	Fri, Apr 7	**Easter Break (No Class)**	Fri, Apr 7 by 9:59 a.m.
Week 12	Mon, Apr 10	Review for Exam 3	
	Wed, Apr 12	**Exam 3**	
	Fri, Apr 14		
Unit 4 – Applications of Trigonometry			
Week 13	Mon, Apr 17	5.1 – The Law of Sines	Tues, Apr 18 by 11:59 p.m.
	Wed, Apr 19	5.2 – The Law of Cosines	Thur, Apr 20 by 11:59 p.m.
	Fri, Apr 21	QUIZ 8	Fri, Apr 21 by 9:59 a.m.
Week 14	Mon, Apr 24	5.3 – Area of a Triangle	Tues, Apr 25 by 11:59 p.m.
	Wed, Apr 26	5.4 – Vectors **Last Day to Drop – Thursday, April 27**	Thur, Apr 27 by 11:59 p.m.
	Fri, Apr 28	5.5 – Application of Vectors	Fri, Apr 28 by 9:59 a.m.
Week 15	Mon, May 1	**Exam 4**	
	Wed, May 3	Review for Final Exam	
	Fri, May 5	Review for Final Exam	
Week 16	Wed, May 10	**Final Exam – The comprehensive final exam will be on Wednesday, May 10 from 8:00am-10:00am.**	

Note: *This schedule is tentative and may be altered as deemed necessary by the instructor. If there are any changes, they will be announced* **in class and via a Blackboard announcement.**