

**South Plains College**  
**Common Course Syllabus: MATH 1316**  
**Revised December 2022**

**Department:** Mathematics, Engineering, and Computer Science

**Discipline:** Mathematics

**Course Number:** MATH 1316

**Course Title:** Plane Trigonometry

**Available Formats:** conventional, hybrid, internet and ITV

**Campuses:** Levelland, Reese, 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

**Textbook:** No textbook is required for this course.

**Supplies:** Please see the instructor's course information sheet for specific supplies.

**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.

**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 cannot receive an X, the instructor will assign an F.

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.

**COVID Syllabus Statement:** If you are experiencing any of the following symptoms, please do not attend class and either seek medical attention or test for COVID-19.

- Cough, shortness of breath, difficulty breathing
- Fever or chills
- Muscles or body aches
- Vomiting or diarrhea
- New loss of taste and smell

Please also notify DeEtte Edens, BSN, RN, Associate Director of Health & Wellness, at [dedens@southplainscollege.edu](mailto:dedens@southplainscollege.edu) or 806-716-2376. Proof of a positive test is required. A home test is sufficient but students must submit a photo of the positive result. The date of test must be written on the test result and an ID included in the photo. If tested elsewhere (clinic, pharmacy, etc.), please submit a copy of the doctor's note or email notification. Results may be emailed to DeEtte Edens, BSN, RN at [dedens@southplainscollege.edu](mailto:dedens@southplainscollege.edu). A student is clear to return to class without further assessment from DeEtte Edens, BSN, RN if they have completed the 5-day isolation period, symptoms have improved, and they are without fever for 24 hours without the use of fever-reducing medication. Students must communicate with DeEtte Edens, BSN, RN prior to their return date if still symptomatic at the end of the 5-day isolation.

**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.

**Course-Specific Contemporary Math Syllabus**  
**1316.002 Plane Trigonometry – Tuesday and Thursday 1:00 p.m. – 2:15 p.m.**  
**Spring 2023 in M123**

**Instructor:** Leah Chenault

**Office:** M106

**Telephone:** (806)716-2740

**Email:** [lchenault@southplainscollege.edu](mailto:lchenault@southplainscollege.edu) (preferred method of contact)

**Office Hours:** As listed below or by appointment. I will be in my office on the Levelland campus during face to face (F2F) times listed below if you wish to meet in person. I will be online (via Zoom) during the office hours listed as virtual. You are welcome to pop in and out of my virtual office hours during that virtual time without scheduling a meeting. I will post the virtual office hour information/invite on Blackboard if you wish to join. If you do join virtually and I am helping someone else, please be patient and wait your turn. *If you need to schedule a time to meet outside of the office hours below, please email me to set up a time.*

| Monday                      | Tuesday | Wednesday                   | Thursday                    | Friday                             |
|-----------------------------|---------|-----------------------------|-----------------------------|------------------------------------|
| F2F: 12:30 p.m. – 2:30 p.m. | N.A.    | F2F: 12:30 p.m. – 2:30 p.m. | F2F: 9:45 a.m. - 10:45 a.m. | Virtual and F2F: 8:30 am –11:30 am |

**Email Correspondence:** Our primary forms of communication will be Blackboard announcements as well as email. If you have a private question that you want to ask outside of class, email is the preferred method of contact. You are expected to use your SPC email address to do so. Due to privacy concerns, I will not reply to an email from you from a different email address. Please give me up to 24 hours to respond to questions sent via email during the work week. Starting on Friday at noon and throughout the weekend, please give me up to 48 hours to respond to an email. If you email about a specific homework question, please include a picture of the question and the work that you have tried in the email. If you need/want to set up a meeting because you don't feel your question can be answered adequately via email, either come by during office hours or email me to set up a meeting time (meeting can be either virtual or face-to-face).

**Disclaimer:** The instructor reserves the right to alter any class policies/dates as deemed necessary by the instructor. If there are any changes, they will be announced **in class and via an announcement in Blackboard.**

**Showing Work:** To receive full credit on an assignment, you must show all work that leads to your answer(s). The work must be legible, make sense and be easy to follow. All work and answers must be handwritten.

**Course Supplies – Please bring the following to class with you each day:**

- Required: Scientific Calculator (with log, ln, sin, cos and tan). Suggested TI-30XIIS. They are inexpensive and user friendly. Graphing calculators as well as phone calculator are not allowed. There will be some assignments, quizzes and exams where you are not allowed to use any calculator.
- Required: Large 3-ring binder, dividers, notebook paper, graph paper (available to print on blackboard), hole punch, pencils, and erasers.
- Required: Printed Notes. A blank copy of the notes will be posted on Blackboard and you will be expected to print them and have them in class. You are expected to fill them out during class. If you miss class for any reason, you will need to watch the notes video on Blackboard and fill in out the notes handout. Your completed notes will be a requirement in the binder check.
- Warning: Do not expect your instructor to have supplies for you to borrow.

**Attendance:** 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 you fail to complete and turn in an assignment (*for any reason*) by the specified date and time, then it will count against your 80%. If your number of absences goes above six, you may be dropped from the class with either an X (if you exceed that number before the drop date) or an F (if you exceed that number after the drop date). Class attendance may be taken at any time during the class period, so please do not be late or leave early. Leaving early and/or being tardy will be considered  $\frac{1}{2}$  absence.

### **Homework and Daily Assignments:**

- Homework will be assigned at each class. Work the problems early enough to seek help if needed.
- Homework is due at the beginning of the next class. Late homework will not be accepted. If you are going to be absent, I will accept your homework via email as long as that email is time-stamped before our scheduled class time and you give me a valid reason for your absence. If the email does not have those two things, you will receive a zero on the assignment.
- Late homework is not accepted under any circumstances. If a homework is turned in late, it will be a zero.
- On days that we do not have a quiz, your daily assignment grade will be calculated as follows:
  1. HW Completion (50% of daily assignment grade)
  2. I will spot check 3-5 HW questions (50% of daily assignment grade)
- On all assignments, you are expected to write your full name at the top, give the assignment a title and clearly number the questions.
- To receive full credit on problems, you must show work that is legible and it must make sense.
- Keys to the homework are posted on Blackboard so that you can check your answers. Please remember that when I grade, not only will I grade the answer, I am grading your work that leads to that answer.
- At the end of the semester, the lowest 4 daily grades (homework/binder) will be dropped.

### **Quizzes:**

- Quizzes will be at the beginning of class on some days. The quiz will be short (approximately 5 minutes) and will be over the material that you are required to memorize for the course.
- Most, if not all, quizzes will be pop-quizzes so you will need to be prepared every class period.
- All quizzes will be cumulative and will be over the required memorization material up to that point in the course.
- You are not allowed to have any resources out on your desk during quizzes.
- On days that we have a quiz, your daily assignment grade will be calculated as follows:
  1. HW Completion (25% of the daily assignment grade)
  2. I will spot check 3-5 HW questions (25% of daily assignment grade)
  3. Quiz (50% of the daily assignment grade)
- Make-up quizzes will NOT be given. If you miss a quiz, the quiz portion of your grade for the day will be a zero.

### **Binder:**

- All students will keep a binder which will be used as a reference and study guide. If done correctly, this binder can serve as a course book and is a great resource to have.
- The binder will be graded randomly by the instructor during the semester. Each time it is graded, you will receive an assignment grade for it.

**Binder Organization:**

- Section 1: Syllabus
- Section 2: Unit 1: By section Notes and Assignment. At the end of the unit you will have a review and an Exam.
- Section 3: Unit 2
- Section 4: Unit 3
- Section 5: Unit 4
- Section 6: Post Unit 4 material and Comprehensive Review.

*Note: Being absent does not excuse you from notes or homework. Notes printouts, notes videos, and assignments are available on Blackboard and should be printed and completed even if you are not in class.*

**Exams:**

- 4 Unit Exams and a Final Exam
- Trig is cumulative so success on one exam will depend on how well you know not only the new material but also the material from previous tests.
- Leaving the class during an exam is not permitted.
- The Final Exam is comprehensive.
- There are no exemptions for the final.
- If you are going to miss an exam, contact your instructor immediately (preferably prior to the exam). Make up exams are very rare and only provided under extreme, documented circumstances.
- If your grade on your final exam is higher than one of the unit tests, I will replace that unit test grade with your final exam grade.
- All electronic communication devices (phones, smart watches, headphones etc) must be put away during exams. Failure to do so will result in a grade of zero on the exam.

**Grading Formula:** Class attendance and a strong work ethic do not guarantee a passing grade. However, these two things are extremely important and do increase the likelihood of passing. The final responsibility for learning lies with the student. The final letter grade for this course will be based on the following:

- 4 Unit Tests at 15% each .....60%
- Daily Assignment Average.....15%
- Final Exam Grade.....25%

**Final Grade Determination:** A 90-100    B 80-89    C 70-79    D 60-69    F 59 or below

**Reviewing Grades on Blackboard:** After I grade your exams and daily assignments, I will post that exam/assignment grade to Blackboard. Therefore, you should be able to log into Blackboard to see a current course average.

**Academic Dishonesty:** Academic dishonesty will not be tolerated. Please see the list of things that constitute plagiarism and cheating in the general 1316 syllabus above. If you violate anything on those lists, you will receive a zero on the exam/assignment and could be subject to other actions outlined in the South Plains College Student Code of Conduct.

**Resources:**

- Blackboard! Outside of the classroom, Blackboard is the hub of the class. The course syllabus, calendar, gradebook, “how to” files, notes handouts, notes videos, and assignments will be available on Blackboard.
- I am available to help you! You may visit with me (either face to face or virtually) during office hours. Also, feel free to email me questions at lchenault@southplainscollege.edu. When you email me, please give me up to 24 hours to respond. My response will be faster during the work week than it will be on weekends. When emailing about a specific homework problem, be sure to include a picture of the problem as well as any work you have tried.

- Peer tutoring is available via SPC. 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>
- 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
- Free tutorial videos are available at the following sites: <http://www.mathtv.com/> and <http://www.khanacademy.org/>.

**Withdrawal Policy:** As required by Texas Education Code Section 51.907, all new students who enroll in a Texas public institution of higher education for the first time beginning with the 2007 fall semester and thereafter, are limited to six course drops throughout their entire undergraduate career. All course drops, including those initiated by students or faculty and any course a transfer student has dropped at another institution, automatically count toward the limit. After six grades of W are received, students must receive grades of A, B, C, D, or F in all courses. There are other exemptions from the six-drop limit and students should consult with a Counselor/Educational Planner before they drop courses to determine these exemptions. Students receiving financial aid must get in touch with the Financial Aid Office before withdrawing from a course. It is the student's responsibility to drop. Excessive absences will result in an administrative withdrawal with a Grade of X or F. If you plan to withdraw, please consult with the instructor immediately. **Note: The last day to drop with a grade of W is Thursday, April 27, 2023.**

#### **Classroom Etiquette:**

- Follow the South Plains College COVID-19 guidelines and expectations.
- Students are expected to be respectful of their fellow classmates and maintain a classroom environment that is conducive to learning. Refrain from using offensive language, talking loudly or off-topic, working on outside assignments, or otherwise being disruptive in class.
- NO tobacco use of any form is allowed in the classroom.
- Food and/or drinks are NOT allowed in the classroom.
- Habitually disruptive students will be asked to leave.
- All electronic communication devices are to be silenced and put away during class unless you are specifically told otherwise by your instructor. You will be given one verbal warning, after which you will be asked to leave.
- If I have to ask you to leave class for any reason (class disruption, cell phone usage etc), you will receive a zero for the day's assignment.

#### **Succeeding in a Math Class:**

- Attend class every class period that you are assigned to be here.
- Check your SPC email and Blackboard at least once per day.
- Be mentally present! Pay attention, take notes and ask questions during class.
- Memorize required material as soon as you are asked to do so.
- Plan ahead. Do homework early enough before the due date that you will have time to ask questions or seek help if you need it.
- For every hour spent in class (this class is roughly 3 classroom hours per week), you should expect to spend 2-3 hours outside of class working on this course. This includes time spent on homework and studying for exams.
- Get to know at least one other person in class and exchange contact information.
- Get help as soon as you feel yourself falling behind! Don't wait!
- All notes handouts, notes videos and assignments for the course are posted on Blackboard. If you want to get ahead, that is encouraged.
- I have found that the best way for a student to study for a math exam is to practice working problems over and over.
- Everyone learns and studies differently. I encourage you to seek out and find what works best for you.

**Spring 2023 Schedule for MATH 1316.002**  
**Tuesday and Thursday from 1:00 p.m. – 2:15 p.m.**

| Week # | Day # | Date                           | Due at Beginning of Class       | Topic for the Day's Class   | Working on in Class      |
|--------|-------|--------------------------------|---------------------------------|---|--------------------------|
| 1      | 1     | T – Jan 17 <sup>th</sup>       |                                 | Course Intro (Syllabus and Blackboard);<br>Arithmetic and Algebra Refresher             | Section 1.1              |
|        | 2     | Th – Jan 19 <sup>th</sup>      | Syllabus Form;<br>1.1 HW        | Intro to Trigonometry of Right Triangles  | Section 1.2              |
| 2      | 3     | T – Jan 24 <sup>th</sup>       | 1.2 HW                          | Angles in Degrees & Radians   | Section 1.3              |
|        | 4     | Th – Jan 26 <sup>th</sup>      | 1.3 HW                          | Trigonometric Functions   | Section 1.4              |
| 3      | 5     | T – Jan 31 <sup>st</sup>       | 1.4 HW                          | Cofunctions, DMS, and More<br>Trigonometric Functions                                   | Section 1.5              |
|        | 6     | Th – Feb 2 <sup>nd</sup>       | 1.5 HW                          | Arc Length, Area of a Sector, Linear &<br>Angular Velocity                              | Section 1.6              |
| 4      | 7     | T – Feb 7 <sup>th</sup>        | 1.6 HW                          | Unit 1 Exam Review  | Unit 1<br>Review         |
|        | 8     | Th – Feb 9 <sup>th</sup>       | Unit 1<br>Review;<br>Notebook 1 | <b>Unit 1 Exam</b>  | <b>Unit 1 Exam</b>       |
| 5      | 9     | T – Feb 14 <sup>th</sup>       |                                 | Pythagorean Identities & Verifications  | Section 2.1              |
|        | 10    | Th – Feb 16 <sup>th</sup>      |                                 | Identities Lab  | Section 2.1<br>continued |
| 6      | 11    | T – Feb 21 <sup>st</sup>       | 2.1 HW                          | Even/Odd Identities & More<br>Verifications   | Section 2.2              |
|        | 12    | Th – Feb 23 <sup>rd</sup>      | 2.2 HW                          | Sum & Difference Identities   | Section 2.3              |
| 7      | 13    | T – Feb 28 <sup>th</sup>       | 2.3 HW                          | Double Angle Identities   | Section 2.4              |
|        | 14    | Th – March<br>2 <sup>nd</sup>  | 2.4 HW                          | Half Angle Identities   | Section 2.5              |
| 8      | 15    | T – March 7 <sup>th</sup>      | 2.5 HW                          | Unit 2 Exam Review  | Unit 2<br>Review         |
|        | 16    | Th – March<br>9 <sup>th</sup>  | Unit 2<br>Review;<br>Notebook 2 | <b>Unit 2 Exam</b>  | <b>Unit 2 Exam</b>       |
| 9      | 17    | T – March 21 <sup>st</sup>     |                                 | Graphing Sine and Cosine  | Section 3.1              |
|        | 18    | Th – March<br>23 <sup>rd</sup> | 3.1 HW                          | Graphing Secant, Cosecant, Tangent and<br>Cotangent                                     | Section 3.2              |
| 10     | 19    | T – March<br>28 <sup>th</sup>  | 3.2 HW                          | Inverse Trig Functions, Solving Basic<br>Trig Equations and Composite Trig<br>Equations | Section 3.3              |
|        | 20    | Th – March<br>30 <sup>th</sup> |                                 | Inverse Trig Functions, Solving Basic<br>Trig Equations and Composite Trig<br>Equations | Section 3.3<br>continued |
| 11     | 21    | T – Apr 4 <sup>th</sup>        | 3.3 HW                          | Solving Advanced Trig Equations   | Section 3.4              |
|        | 22    | Th – Apr 6 <sup>th</sup>       | 3.4 HW                          | Unit 3 Exam Review  | Unit 3<br>Review         |
| 12     | 23    | T – Apr 11 <sup>th</sup>       | Unit 3<br>Review;<br>Notebook 3 | <b>Unit 3 Exam</b>  | <b>Unit 3 Exam</b>       |
|        | 24    | Th – Apr 13 <sup>th</sup>      |                                 | Law of Sines  | Section 4.1              |
| 13     | 25    | T – Apr 18 <sup>th</sup>       | 4.1 HW                          | Law of Cosines  | Section 4.2              |

|    |    |                           |                              |  |                    |
|----|----|---------------------------|------------------------------|--|--------------------|
|    | 26 | Th – Apr 20 <sup>th</sup> | 4.2 HW                       | Intro to Vectors   | Section 4.3        |
| 14 | 27 | T – Apr 25 <sup>th</sup>  | 4.3 HW                       | Vector Applications  | Section 4.4        |
|    | 28 | Th – Apr 27 <sup>th</sup> | 4.4 HW                       | Unit 4 Exam Review   | Unit 4 Review      |
| 15 | 29 | T – May 2 <sup>nd</sup>   | Unit 4 Review;<br>Notebook 4 | <b>Unit 4 Exam</b>   | <b>Unit 4 Exam</b> |
|    | 30 | Th – May 4 <sup>th</sup>  |                              | Review for Comprehensive Final   | Final Review       |
| 16 | 31 | Th – May 11 <sup>th</sup> | Final Review                 | <b>Final Exam</b> – The comprehensive final exam will be from 10:15 a.m. to 12:15 p.m. on Thursday, May 11 <sup>th</sup> . | <b>Final Exam</b>  |

***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.***

**Personal Info**

Printed Name: \_\_\_\_\_

Age: \_\_\_\_\_

High School Attended: \_\_\_\_\_

Current City: \_\_\_\_\_

Major: \_\_\_\_\_

1. List any math classes (whether high school or college) that you completed successfully in the last four years:
  
  
  
  
  
  
  
  
  
  
2. Consider your weekly schedule (school, work, personal). Write the times in which you plan to work on this course during the week. You must account for at least 6 hours outside of our class time.
  
  
  
  
  
  
  
  
  
  
3. Below, please write anything else you feel I should know about you that pertains to this class.

**Syllabus Receipt**

I certify that I have read and understood the class syllabus for MATH 1316-002, which is being taught in the spring semester of 2023.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date