

South Plains College
Common Course Syllabus: MATH 1316
Revised December 2019

Department: Mathematics, Engineering, and Computer Science

Discipline: Mathematics

Course Number: MATH 1316

Course Title: Plane Trigonometry

Available Formats: conventional 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 TSIA, TSI-exempt status, or a successful completion with a grade of 'C' or better in MATH 1314.

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

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

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 Policy: Attendance and effort are the most important activities for success in this course. Records of your attendance are maintained throughout the semester. Five (5) absences, **for any reason**, are allotted to the student for the semester. Tardies count as one-half (1/2) of an absence. Tardies will be applied for consistently being late to class, as deemed by the instructor and leaving class early. If this number is exceeded, the instructor has the right to drop you with a grade of F or an X, depending on their discretion.

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 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.

**MATH 1316 – Plane Trigonometry
Spring 2020**

Instructor: Jerod Clopton
Office: M102
Email: jclopton@southplainscollege.edu
Phone: 806-716-2738

Sections: 441 and 442
Class Time: 441: MWF 8:00 – 8:50
 442: MWF 9:00 – 9:50
Location: ITV

Office Hours:

| Monday | Tuesday | Wednesday | Thursday | Friday |
|-------------------|--------------|---------------|--------------|---------------|
| 10:15 - 11:00 | 9:30 - 10:00 | 10:15 - 11:00 | 9:30 - 10:00 | 10:00 - 12:00 |
| 2:00 - 3:00 | 2:15 - 3:00 | 2:00 - 3:00 | 2:15 - 3:00 | |
| Or by appointment | | | | |

Textbook: The textbook is required for this section of Math 1316.

Supplies: Pencils, notebook, lined sheets of notebook paper, scientific calculator with trigonometric functions. Graphing calculators, calculators on cellphones, or any other electronic devices will not be allowed during in class assignments.

Assignments and Grading: Homework assignments will be made daily. The homework will not be picked up or graded. Please note that homework is the means for the practice that is required to fully understand each topic and prepare for quizzes and exam. Expect to spend a minimum of 4 to 6 hours each week outside of class working on homework assignments and preparing for quizzes and exams. Quizzes will be given weekly (on no specific day of the week) and no make-up exams will be given. Your quiz average will account for 20% of your final grade, while all exams will count for 80% of your final grade. Expect to have 4 major exams (15% each) throughout the course and a comprehensive final exam (20%) at the end of the course. No make-up exams will be given. The grade from your final exam will replace your lowest exam grade, provided that the grade from the final exam is greater than your lowest exam 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%).

Amendment to Attendance Policy: Record of your attendance will be defined by your presence during in-class assessments; such as quizzes and exams. For example, if you are not present and no quiz or exam is given, your absence on that class day will not be recorded. However, if you are not present and a quiz or exam is given, your absence on that class day will be recorded. By applying the attendance policy set forth by the department, if you miss participating in 5 or more quizzes or exams you may be dropped from this course with a grade of W or F.

Resources:

- Free tutoring is available in M116 on the Levelland campus. Hours for the tutors will be posted there.
- A copy of the textbook for this course is available in the Levelland and Reese Campus libraries
- Exam reviews, exam and quiz solutions, links to additional online resources, will be posted in Blackboard

Use of Electronic Devices: Turn off all electronic devices before class. The use of cell phones, music players, smart watches (other than checking time), pagers, personal computers, tablets, etc., will not be tolerated. If consistent violation of this policy persists then consequences will be administered. If an unsanctioned device is in use during an exam, then its grade will be zero percent (0%) and removal from the course may be applied.

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

Math1316 Tentative Course Schedule for Spring 2020

| Week | Date | Topic | Assignment |
|------|--------------------|--|---|
| 1 | Mon, Jan 13 | Introduction / Assessment | Assessment Handout |
| | Wed, Jan 15 | 1.1 Angles and Degree Measure | p. 52; 11-101 (odds), 103, 105, 106, 109, |
| | Fri, Jan 17 | | |
| 2 | Mon, Jan 20 | No Class (Martin Luther King Holiday) | |
| | Wed, Jan 22 | 1.2 Radian Measure, Arc Length, Area | p. 61; 5-105 (odds), omit 97 & 101 |
| | Fri, Jan 24 | 1.4 The Trig Functions | p. 80; 5-99 (odds), omit 93 |
| 3 | Mon, Jan 27 | 1.5 Right Triangle Trigonometry | p. 91; 7-49 (odds) |
| | Wed, Jan 29 | 1.6 Fundamental Identities and Reference Angles | p. 104; 3-55 (odds) |
| | Fri, Jan 31 | | |
| 4 | Mon, Feb 3 | 1.3 Angular and Linear Velocity | p. 69; 5-51 (odds) |
| | Wed, Feb 5 | | |
| | Fri, Feb 7 | Review | |
| 5 | Mon, Feb 10 | Exam 1 | |
| | Wed, Feb 12 | 3.1 Basic Identities | p. 173; 1-101 (odds) |
| | Fri, Feb 14 | | |
| 6 | Mon, Feb 17 | 3.2 Verifying Identities | p. 181; 5-71 |
| | Wed, Feb 19 | 3.2 Verifying Identities | Worksheet |
| | Fri, Feb 21 | | |
| 7 | Mon, Feb 24 | 3.3 Sum and Difference Identities for Cosine | p. 189; 5-93 (odds) |
| | Wed, Feb 26 | 3.4 Sum and Difference Identities for Sine and Tangent | p. 195; 1-61 (odds) |
| | Fri, Feb 28 | 3.5 Double and Half Angle Identities | p. 203; 1-63 (odds) |
| 8 | Mon, Mar 2 | 3.6 Product and Sum Identities | p. 213; 1-55 (odds) |
| | Wed, Mar 4 | | |
| | Fri, Mar 6 | Review | |
| 9 | Mon, Mar 9 | Exam 2 | |
| | Wed, Mar 11 | 2.1 The Unit Circle and Graphing | p. 123; 73-100 (all) |

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| | Fri, Mar 13 | 2.2 The General Sine Wave | p. 133; 19-36 (all) |
| | Mon, Mar 16 | No Class (Spring Break) | |
| | Wed, Mar 18 | No Class (Spring Break) | |
| | Fri, Mar 20 | No Class (Spring Break) | |
| 10 | Mon, Mar 23 | 2.3 Graphs of Secant and Cosecant Functions | p. 138; 33-53 (all) |
| | Wed, Mar 25 | 2.4 Graphs of Tangent and Cotangent Functions | p. 150; 39-56 (all) |
| | Fri, Mar 27 | 4.2 Basic Sine, Cosine, and Tangent Equations | p. 242; 3-61 (odd) |
| 11 | Mon, Mar 30 | 4.3 Equations Involving Compositions | p. 249; 1-83 (odd) |
| | Wed, Apr 1 | 4.4 Trig Equations of Quadratic Type | p. 257 1-85 (odd) |
| | Fri, Apr 3 | Review | |
| 12 | Mon, Apr 6 | Exam 3 | |
| | Wed, Apr 8 | 5.1 The Law of Sines | p. 273; 5-43 (odd) |
| | Fri, Apr 10 | | |
| 13 | Mon, Apr 13 | No Class (Easter Holiday) | |
| | Wed, Apr 15 | 5.2 The Law of Cosines | p. 282; 11-23 (odd) |
| | Fri, Apr 17 | 5.3 Area of a Triangle | p. 290; 5-27 (odd) |
| 14 | Mon, Apr 20 | 5.4 Vector | p. 301; 9-87 (odd) |
| | Wed, Apr 22 | 5.5 Application of Vectors | p. 301; 1-19 (odd) |
| | Fri, Apr 24 | Review | |
| 15 | Mon, Apr 27 | Exam 4 | |
| | Wed, Apr 29 | Review for Final Exam | |
| | Fri, May 1 | Review for Final Exam | |
| 16 | Mon, May 4 | Final Exam: 8:00 – 10:00 | |