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, 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

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/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.

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 2413 - Calculus I Syllabus

Instructor:	Jason Groves	**Office:**	B001 (Lubbock Downtown Center)
e-mail:	jgroves@southplainscollege.edu		
Office Hours:	Mon-Thurs: 11 am - 12:30 pm		
	or by appointment.		

Materials: Students must have regular access to the materials listed below.

Textbook: Calculus, Volume 1 OpenStax CNX.. This text my be retrieved at `https://openstax.org/details/books/calculus-volume-1` (a direct link is also available on blackboard).

Writing: Suitable writing instruments and paper for taking notes and completing assignments. Written work will be handed in virtually by use of blackboard or email (instructions for how to do this are in a later section). Turned in work should be done in pencil, dark enough to be clearly seen on a digital scan.

Calculator: Calculators with e^x, ln, and trigonometric function keys will be required. These can be found on scientific calculators (inexpensively obtained from Wal-Mart or any other big-box store) or graphing calculators. There are free online options such as Wolfram Alpha (`wolframalpha.com`), Desmos (`www.desmos.com` Desmos also has smartphone apps) or GeoGebra (`www.geogebra.org`). Smartphone apps such as Panecal or ClassCalc are also available for low cost (or free).

Computer: Regular access to a reliable computer and internet connection will be required for study and for completion of assignments. Access to a printer may be needed to print out some assignments. If you do not currently have a computer, or the technology you have becomes unusable, each computer lab at any of SPC's campuses will be available throughout the semester as well. Students will also need a scanner, or a smartphone scanning app for submitting written assignments. As part of their enrollment at SPC, all students have access to Microsoft OneDrive via their SPC email and login. Instructions on how to use OneDrive to scan and submit assignments can be found in the Syllabus and Materials section of the blackboard course (instructions are similar for other scanning apps).

Blackboard: Blackboard (accessible via the SPC website) will be used as a central hub for the course. Students will find this syllabus, and all other course materials, as well as assignments, the textbook, etc. Students should be checking Blackboard often for announcements and updates, and to access the text. Blackboard utilizes students' SPC email, and students should be checking their SPC email regularly. *While there is an app for blackboard access, some features in the mobile app are suppressed. Students should plan on accessing blackboard from a computer at least a few times each week.*

Gradescope: The gradescope app will be used to submit most, if not all assignments. It can be downloaded from both Google Play and iOS app stores.

Class Attendance: Attendance for this course will be assessed by participation. Missing more than 2 exams, or any 5 assignments may result in being dropped from the course.

Assessment: Grading will be done according to the standard 10 percent scale (i.e. 100% - 90% is an A, etc.) with assignments weighted according to the following:

Homework:	30%
Exams	50%
Final Exam	20%

Homework: Homework will be assigned weekly, and each assignment is found in the current week of course content. Please see the document "How to: Writing Mathematically (showing your work)" to learn how written work should be submitted. All work on homework or exams should be neat, organized, well explained, and legible. Graphs, diagrams, tables, and other visual aids are welcome and encouraged wherever appropriate, and should be created with care.

Exams: There will be five midterm exams given during this course, as indicated in the course calendar. Your local faculty member/facilitator will coordinate your exam time with you to proctor the exam. They will administer the exam and collect your work at the end. During the exam all computers, mobile devices, notes and external aides will be prohibited. *Makeup exams are not given.*

Final Exam: The final exam is comprehensive, and a required part of the course. Failure to take the final exam results in an automatic F. The Final Exam must be submitted no later than Wednesday, May 10, 5 pm

Extra Credit: Extra Credit assignments are not offered in this course. Occasionally bonus problems may appear on exams.

Week 1 1/17 - 1/20	Definition of Limit Limit Computation	2.2, 4.6 2.3
Week 2 1/23 - 1/27	Continuity Definition of Derivative	2.4 3.1, 3.2
Week 3 1/30 - 2/3	Derivative Rules Exam 1 (2.2, - 2.4, 3.1 - 3.4, 4.6)	3.3, 3.4
Week 4 2/6 - 2/10	Derivatives of Trigonometric Functions Chain Rule	3.5 3.6
Week 5 2/13 - 2/17	Inverses, Exponentials and Logarithms	3.7, 3.9
Week 6 2/20 - 2/24	Implicit Differentiation, Related Rates Exam 2 (3.5 - 4.1)	3.8, 4.1
Week 7 2/27 - 3/3	Linear Approximations Mean Value Theorem/Extreme Value Theorem	4.2 4.3, 4.4
Week 8 3/6 - 3/10	Curve Sketching L'Hopital's Rule Optimization Exam 3 (4.2 - 4.7)	4.5 4.8 4.7
3/13 - 3/17	Spring Break	
Week 9 3/20 - 3/24	Anti-Derivatives Definite Integral	4.10 5.1, 5.2
Week 10 3/27 - 3/31	Fundamental Theorems of Calculus, Net Change Integration by Substitution	5.3, 5.4 5.5
Week 11 4/3 - 4/7	Exponential, Logarithmic, and Inverse Trigonometric Integrals Exam 4 (4.10 - 5.7)	5.6, 5.7
Week 12 4/10 - 4/14	Area Between Curves	6.1
Week 13 4/17 - 4/21	Volumes of rotations	6.2, 6.3
Week 14 4/24 - 4/28	Arc Length/Surface Area Work/Force Applications Exam 5 (6.1 - 6.5)	6.4 6.5
Week 15 5/1 - 5/5	Centroids and Moments Differential Equations	6.6 6.8
Week 16 5/8 - 5/12	Finals Week Final Exam due by Wednesday, 5/10	